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DATA AND DISPLACEMENT

Assessing the Practical and Ethical Implications of Data-Driven Humanitarianism for Internally Displaced Persons in Camp-Like Settings



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Data and Displacement

Assessing the Practical and Ethical Implications of Data-Driven Humanitarianism for Internally Displaced Persons in Camp-Like Settings

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Table of contents

Executive summary	04
Recommendations	05
List of abbreviations	06
Research report	
1. Introduction	08
2. Methodology	09
Research questions.....	09
Research tools and recruitment.....	09
Interview coding.....	17
Ethical considerations.....	18
A participatory ethos.....	19
3. Datafication of the humanitarian sector	22
4. Visualising the data journey	28
5. Camp-like settings in north-eastern Nigeria	31
6. Camp-like settings in South Sudan	34
Summary of findings	39
Detailed recommendations	40
Selected references	42
The research team	43

Executive summary

The *Data and Displacement* project provides an assessment of the operational and ethical challenges of data-driven humanitarian assistance. Specifically, it focuses on the data-based targeting of humanitarian assistance to Internally Displaced Persons (IDPs) in camp-like settings across two regions marked by high levels of conflict and displacement: north-eastern Nigeria and South Sudan.

The project team undertook a series of 174 in-depth interviews with international data experts, donors, and humanitarian practitioners from a range of governmental and non-governmental organisations; with regional stakeholders and practitioners involved in the provision of humanitarian assistance in north-eastern Nigeria and South Sudan; as well as with IDPs located in camps across the two regions. An analysis of relevant datasets was also undertaken, and visualisation tools were co-produced with research participants through various participatory workshops.

This research sharpens our understanding of the challenges of data-driven humanitarian interventions in contexts of conflict and displacement. Key findings are:

- ▶ A disconnect exists between practices on the ground and international humanitarian standards, principles, and guidelines, both in relation to operational issues such as the coordination of data as well as in relation to ethical issues such as informed consent.
- ▶ These shortcomings reflect a context marked by limited resources and situations of ongoing conflict, as well as the logics and ethics of humanitarian practice, and the restricted data literacies of both IDP and stakeholder communities.
- ▶ To address the various operational and ethical problems identified by this research, further attention and resources need to be directed toward the training, education, and meaningful engagement of affected communities and stakeholders in the collection, management, and use of humanitarian data.
- ▶ Attention also needs to be paid to operational and ethical problems arising from repeated data collection, particularly in contexts characterised by a generalised lack of resources and assistance capacities, and where levels of basic need are high.

In **operational terms**, the project findings indicate that fragmented and incoherent processes of data collection are evident both in north-eastern Nigeria and South Sudan. Donors and international organisations tend to drive the demand for data, yet this does not clearly translate into benefits for IDP communities. Cluster and agency-based data collection processes, propelled by competition and the need to report to donors, lead to repeated processes of data collection within the same communities, which in turn generates assessment fatigue for IDPs who often share their data without seeing any tangible results in so doing. Which actors are collecting data and how, if at all, their data is linked up to wider datasets and systems of coordination is not always clear.

A lack of capacity is evident across both contexts. This includes a lack of material and technological resources, and a lack of personnel sufficiently trained in data ethics. Moreover, there is limited visibility and understanding of data on the part of IDPs and some regional stakeholders, with upward-flows of data to agencies and donors usually prioritised in the generation and use of data. Data collection tends to be focused on new arrivals and specific crises or concerns, while periodic data collection occurs regardless of whether assistance has been provided. A failure to consistently follow-up on findings may hinder the effective targeting of protection and services.

Many of the operational issues above raise **ethical concerns**. Processes of informed consent need to be reviewed, with IDPs often not fully understanding why their data is collected, how it is used, or their rights in relation to data collection and use. Engrained power dynamics between humanitarians and IDPs as well as between humanitarians and donors, along with situations of restricted funding and conditions of widespread deprivation, render ethical challenges particularly pressing in conflict and displacement contexts. Where resources are limited and humanitarian responses are vital, there is a risk that exclusively pragmatic decisions are prioritised over ethical considerations related to the principles of data responsibility in humanitarian action, including the core humanitarian principle of do no harm. These risks are further exacerbated with new modalities of data acquisition, such as where IDP assistance is dependent on enrolment within biometric registration systems.

Recommendations

While we recognise that there are significant resource constraints in the contexts under examination, we recommend that efforts are made to bridge the disconnect between practices on the ground and international humanitarian standards, principles, and guidelines. We also recommend that ethical commitments are put at the centre of developments in data-driven humanitarianism. Our findings suggest that existing ethical standards are limited both by a failure of implementation, as well as by a failure to embed data rights in current practices of informed consent. Data collection should be pursued to inform decision-making and to provide tangible benefits to the communities providing their data. Since data collection does not always lead to assistance, the likely scope and limits of benefits need to be clearly communicated to IDPs in advance. Data collection and data use should be fully understood by those involved, based on meaningful processes of informed consent, while findings should be shared in ways that are accessible to all. Data rights should be central to processes of data collection, management, and use, while investment in the training, education, and engagement of both IDP and stakeholder communities should be prioritised.

Specifically, the *Data and Displacement* project findings highlight the need for action in the following areas:

Data minimisation and data sharing - existing guidelines need to emphasise that data collection is only appropriate where required for actions that will benefit members of the affected community. Targeting support is problematic if it means that data is repeatedly collected from communities that will ultimately not be provided with any assistance. Mechanisms to share data with IDPs should be prioritised and included in programme design and funding structures.

Meaningful informed consent - given the changing nature of humanitarian data and new modalities of data acquisition, existing ethical guidelines should be revisited and enhanced based on key principles in data ethics. IDPs need to be fully informed in non-technical language of their data rights, the goals of data collection, and any foreseeable risks, so that they can consider from a position of knowledge whether to participate. Dependency on service engagement cannot be regarded as a form of meaningful consent, and mechanisms need to be put in place to facilitate the empowerment of affected communities in the collection, management, and use of their data.

Capacity building and data literacy - investment in infrastructural and technological facilities is required to build capacities, so that data can be appropriately collected, stored, shared, and utilised. Enhanced training in data ethics and literacies is also required to ensure the ethicality of data collection and use, and to ensure that IDPs better understand how their data is managed and used.

More detailed recommendations are provided at the end of this research report.

List of Abbreviations

CEDAR	Centre for Enterprise and Action Research
D&D	Data and Displacement
DSEG	Data Science and Ethics Group
GISCO	Grassroot Initiative for Strengthening Community Resilience
HDE	Humanitarian Data Ecosystem
HDX	Humanitarian Data Exchange
HXL	Humanitarian Exchange Language
IASC	Inter-Agency Standing Committee
IASFM	International Association for the Study of Forced Migration
ICRC	International Committee of the Red Cross
IDPs	Internally Displaced Persons
IFRC	International Federation of Red Cross and Red Crescent Societies
INGO	International Non-Governmental Organisation
IO	International Organisations
IOM	International Organization for Migration
NGO	Non-Governmental Organisation
OCHA	United Nations Office for the Coordination of Human Affairs
PoC	Protection of Civilian Sites
SGBV	Sexual and Gender Based Violence
SH	Stakeholders
TOC	Theory of Change
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNMISS	United Nations Mission in South Sudan
WASH	Water, Sanitation and Hygiene

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1. INTRODUCTION

It is now a decade since the proclamation of a **humanitarian “data revolution”** (Meier 2012; Pearn et al, 2022), with the rise of humanitarian “innovation” and the proliferation of “data solutions” provoking a range of urgent calls for the assessment of changing data practices in the sector (e.g. Burns, 2015). In this context, new research has been undertaken on issues such as data responsibility and the sharing of humanitarian data (Fast, 2022), as well as on the key principles required for the ethical generation and use of humanitarian data (Data Values, 2022). This report builds on such works to assess the ethics and efficacy of data-driven humanitarianism in situations of conflict and displacement.

During 2021 and 2022, the *Data and Displacement* research team conducted **primary research** with international data experts, donors, and humanitarian practitioners from a range of governmental and non-governmental organisations; with regional stakeholders and practitioners involved in the provision of humanitarian assistance in north-eastern Nigeria and South Sudan; as well as with IDPs located in camps across the two regions. The research focuses specifically on the practical and ethical implications of data-driven humanitarianism across internal displacement camps in north-eastern Nigeria and South Sudan. On this basis, our report provides important new insights into the **lived experiences of data collection and use for IDPs in camp-like settings**.

A **contextualised focus on north-eastern Nigeria and South Sudan** enables consideration of data-driven humanitarianism in two regions where the collection of large-scale data is well established. A significant number of organisations in each of these contexts provide datasets for the open data sharing platform Humanitarian Data Exchange (HDX), which renders them important locations to analyse the implications of data-driven humanitarian assistance. Internal displacement has been an ongoing issue in the north-eastern region of Nigeria for the past two decades, with the activities of non-state armed groups generating a range of challenges for the 2.2 million internally displaced in the country (OCHA, 2022a; see also Fayehun and Àkànle, 2022). Although South Sudan gained independence in July 2011, conflict broke out in December 2013 leading to high levels of violence and displacement. Over 2 million people are currently internally displaced within the country (OCHA, 2022b).

This report recognises the **contested definition of humanitarian data** and the complexity of relations between different actors and agencies involved in its production and use. **Data** is defined in the sector as the “re-interpretable representation of information in a formalised manner suitable for communication, interpretation, or processing” (IASC, 2021). Nevertheless, we understand data to always be generated “for

someone and some purpose” (cf. Cox, 1981), and recognise that data collection tools, measurement units, and data management systems are inseparable from the social relations and social practices through which they are produced. Therefore, the project is attentive to how meanings and values are attributed to different types and forms of data within specific social contexts. **Data-driven humanitarianism** is thus referred to in the report not as a statement of fact, but as a tendency and aspiration within the sector that requires further unpacking.

Data and Displacement is based on a unique collaboration of multidisciplinary scholars from Nigeria, South Sudan, and the UK, who collectively work across the academic disciplines of Data Science, Geography, International Relations, Law, Politics, Peace Studies, and Sociology. The team integrates this academic expertise with the operational expertise of humanitarian practitioners from the International Organization for Migration (IOM), the UN migration expert. Our project benefits from ‘insider’ knowledge relevant to the regions in focus, while some members of the research team also experienced internal displacement and hence have first-hand experience of humanitarian data practices as IDPs. Drawing on our collaborative strengths, we provide a **contextualised analysis** of data-driven humanitarianism, which draws on **mixed methods** and the strengths of **qualitative research** to provide in-depth understanding of operational and ethical challenges to the provision of assistance in conflict and displacement. While engaging the insights of a range of international and regional actors and agencies, we also **centre the lived experiences of IDPs** in recognition of the need to transform the “unequal power dynamics that all too often underpin the design, collection, use and governance of data” in the humanitarian sector (Data Values, 2022).

The report is divided into six sections, including this introduction. In Section 2, we provide an overview of the project methodology and our theory of change. We then move to an analysis of four thematic areas, each reflecting a different work package from the project. Section 3 draws on in-depth qualitative interviews with data experts and representatives from a range of humanitarian and donor agencies to explore the datafication of the humanitarian sector. Section 4 draws on dataset analysis and participatory research to visualise how data moves through different systems and processes. Sections 5 and 6 draw on in-depth qualitative interviews with local stakeholders, regional practitioners, and IDPs, focusing on north-eastern Nigeria and South Sudan respectively. They provide insights into contextualised operational and ethical issues within camp-like settings. A summary of findings and detailed recommendations are provided at the end of the report.

2. METHODOLOGY

Data and Displacement assesses the data-based humanitarian targeting of assistance to IDPs in two contexts that are characterised by conflict and high levels of displacement: north-eastern Nigeria and South Sudan. It examines the production and use of large-scale data in each case, focusing on the operational and ethical challenges that arise in the collection and use of IDP data.

Research questions

Assessing the opportunities and risks of the “data revolution” for the targeting of humanitarian assistance in situations of conflict and displacement, the *Data and Displacement* project explores the production and use of humanitarian data, as well as the operational and ethical dimensions of data-based humanitarian protection and assistance. It asks:

1. How do contextual factors shape the *production* of humanitarian data?
2. How effective is the *use* of data-based targeting in the provision of humanitarian protection and assistance in practice?
3. What *operational* challenges arise in the collation and use of large-scale data for humanitarian protection and assistance, and how can these be addressed?
4. What *ethical* concerns emerge in the development of data-driven humanitarianism, and how can these be addressed?

In addressing these questions, *Data and Displacement* employs mixed methods, combining **dataset analysis** and **visualisation techniques** with a thematic analysis of **174 semi-structured qualitative interviews** with a total of **182 interviewees**. Qualitative interviews are particularly helpful in facilitating an in-depth contextual analysis, while visualisation techniques facilitate the active inclusion of IDPs within the research process. A purposive sampling technique was used to encapsulate the perspectives of a diverse range of practitioners, stakeholders, and IDPs (see below). While our sample of interviewees is not statistically representative and does not capture the full diversity of views and experiences in the field sites or the humanitarian sector, the range of views and experiences that we were able to capture, and the detailed qualitative analysis undertaken, provides valuable insights into the practical and ethical implications of data-driven humanitarianism for IDPs. As well as engaging international data experts, donors, and humanitarian practitioners from a range of governmental and non-governmental organisations, the project also engages regional stakeholders and local humanitarian practitioners in the assessment of data-driven processes of targeted assistance, while centring the perspectives of IDPs within the research design.



Research tools and recruitment

Datafication of the humanitarian sector

The analysis of the **datafication of the humanitarian sector**, examined in Section 3, is based on a series of 34 in-depth qualitative interviews with a total of 42 international data experts, donors, and humanitarian practitioners from a range of governmental and non-governmental organisations. Interviews were semi-structured and were undertaken online between April and July 2021. These lasted on average around one hour, with questions focused on the meaning of humanitarian data, the development of data-driven humanitarianism, and key ethical and operational issues arising including the potential for harm. Flexibility was maintained in the questioning to allow research participants to elaborate on areas of concern or raise new issues relevant to their experience and expertise. Participants were recruited using a purposive sample strategy to provide a range of perspectives across key agencies and sectors, and to ensure the inclusion of regional perspectives as well as international perspectives. Members of the research team recruited research participants directly.

Table 1 provides an overview of the agencies and organisations from which research participants were recruited for the interviews. It includes the number of participants from each organisation interviewed and the number of interviews in brackets. On the suggestion of research participants, several interviews were group-based.

Table 1: Humanitarian organisations and research participants

Name	Role	Participants (interviews)
ACAPS - Assessment Capacities Project	Non-profit / Non-governmental - Information gatherer / provider in crisis and long-scale humanitarian situations	1 (1)
AHA - ASEAN Coordinating Centre for Humanitarian Assistance	Intergovernmental - ASEAN's coordinating centre for humanitarian assistance on disaster management	1 (1)
ALNAP - Active Learning Network for Accountability and Performance in Humanitarian Action	Non-profit / Non-governmental - Global network working on improving responses to humanitarian crises	1 (1)
Canadian Red Cross	Non-profit / Non-governmental - Humanitarian organisation, Canadian chapter	1 (1)
CDAC Network	Non-profit / Non-governmental - Global network working on communication, community engagement and accountability in humanitarian action	3 (1)
Centre for Humanitarian Change	Non-profit / Non-governmental - Kenya-based think tank working on use and impact of foreign aid	1 (1)
Displacement Tracking Matrix (IOM)	Intergovernmental - International Organisation for Migration-led system to track and monitor displacement and population mobility	1 (1)
ECHO - European Civil Protection and Humanitarian Aid operations	Intergovernmental - European Commission's Directorate General for Humanitarian Aid operations	1 (1)
FAO - Food and Agriculture Organisation	Intergovernmental - United Nations' agency working on food security around the world	1 (1)
FCDO - Foreign Commonwealth and Development Office	Governmental - United Kingdom's Foreign, Commonwealth and Development Office	2 (2)
FDRS - Federation-wide databank and reporting system	Non-profit / Non-governmental - International Federation of the Red Cross's databank and reporting system	1 (1)
Feinstein International Centre (Tufts University)	Humanitarian data expert - Research and teaching centre focused on promoting evidence-based policy responses to humanitarian crises	1 (1)
Global Protection Cluster	Non-profit / Non-governmental - Global network engaged in protection work in humanitarian crises	1 (1)
Ground Truth Solutions	Non-profit / Non-governmental - Austria-based organisation working on centring humanitarian action on recipients' needs	1 (1)
Humanitarian OpenStreetMap Team (HOT)	Non-profit / Non-governmental - Organisation providing open-access map data for disaster and risk management	1 (1)
IDMC - Internal Displacement Monitoring Centre	Non-profit / Non-governmental - Data gatherer and observatory, part of the Norwegian Refugee Council	1 (1)
IFRC - International Federation of the Red Cross	Non-profit / Non-governmental - Network supporting action of national Red Cross world-wide	1 (1)
IOM - International Organization for Migration	Intergovernmental - Organisation promoting humane and orderly migration, part of the UN system	4 (4)
IPC Global Support Unit	Non-profit / Non-governmental - Global partnership for classifying severity and magnitude of food insecurity and malnutrition around the world	2 (1)
JIPS - Joint IDP Profiling Service	Non-profit / Non-governmental - Information gatherer / provider working with IDP communities around the world	1 (1)
Map Action	Non-profit / Non-governmental - Organisation working on mapping humanitarian work in crisis situations	1 (1)
OCHA - Office for the Coordination of Humanitarian Affairs	Intergovernmental - United Nations Office coordinating UN agencies work on humanitarian matters	2 (2)
OCHA Centre for Humanitarian Data	Intergovernmental - OCHA-led centre for increasing the use and impact of data in the humanitarian sector	1 (2)

(Continued...)

Name	Role	Participants (interviews)
ODI - Overseas Development Institute	Non-profit / Non-governmental - Think tank focused on global injustice and inequality	1 (1)
REACH Initiative	Non-profit / Non-governmental - Data collection and analysis initiative part of IMPACT think tank	1 (1)
Translators Without Borders	Non-profit / Non-governmental - global-wide community of translators and language specialists working with humanitarian and development organisations worldwide	2 (2)
UNHCR - United Nations High Commissioner for Refugees	Intergovernmental - United Nations' Refugee Agency	1 (1)
USAID	Governmental - United States' Development Agency	5 (1)
WFP - World Food Programme	Intergovernmental - United Nations agency for delivering food assistance in emergencies and improving communities' nutrition	1 (1)
Total		42 (34)

Visualising the data journey

The **visualisation of the 'data journey'** in Section 4 is based on an analysis of relevant datasets from the HDX open data sharing platform, as well as on a series of participatory workshops with humanitarian practitioners in Geneva (November 2021) and with regional stakeholders and IDPs in Abuja, Nigeria (July 2022). The dataset analysis focused on the coverage, granularity and interoperability of datasets which were generated from data collected at the seven IDP camps in north-eastern Nigeria and South Sudan where our research was conducted. This was complemented by a review of the interview data from across our project, which includes those interviews listed above, as well as interviews with IDPs and with regional stakeholders and practitioners involved in the provision of humanitarian assistance, as documented below. Participatory workshops with representatives of each of these groups in Geneva and Abuja further facilitated the review of the visualisation and provided key insights into areas of friction surrounding the movement of data at different stages of the journey.



Camp-like settings in north-eastern Nigeria

The analysis of data-driven humanitarianism in **camp-like settings in north-eastern Nigeria** for Section 5 is based on a series of 70 in-depth qualitative interviews across five camps in Maiduguri, Borno state. A total of 50 interviews were undertaken with IDPs and 20 with stakeholders and practitioners working with IDPs in the region. Interviews were semi-structured and were undertaken face-to-face in two phases to enable a review of initial interview data and questions. A total of 22 interviews were carried out in phase one, from March to April 2021, 11 with IDPs and 11 with stakeholders. A further 48 interviews were carried out from October 2021 to January 2022, 39 with IDPs and 9 with stakeholders. On average, interviews lasted around one hour, with questions for IDPs focused on displacement experiences, camp conditions, data collection and use, and the project's visualisation materials. Questions for stakeholders focused on organisational background, data collection and use, efficacy and ethics of humanitarian assistance, and the project's visualisation materials. Flexibility was maintained in the questioning to allow research participants to elaborate on areas of concern or to raise new issues, as relevant to their experience and expertise. Stakeholder participants were recruited using a purposive sampling strategy to provide a range of perspectives across key agencies and sectors, while IDPs were recruited to ensure a diverse sample of gender and age across the five camps. Members of the research team recruited research participants directly.

Table 2 provides an overview of the agencies and organisations from which stakeholders were recruited for the interviews. It includes the number of participants from each organisation interviewed and the number of interviews in brackets. All interviews were individually based. Figures 1-5 provide a breakdown of our IDP sample across both phases of the research according

to age (Figure 1), age and location (Figure 2), location and gender (Figure 3), location and faith (Figure 4), and duration of time at the camp at the time of interview (Figure 5).

Table 2: Stakeholder organisations and research participants (Nigeria)

Name	Role	Participants (interviews)
<i>Action Against Hunger</i>	Non-profit / Non-governmental - Organisation focused on predicting, preventing, and treating life-threatening hunger	1 (1)
<i>ACTED - Agency for Technical Cooperation and Development</i>	Non-profit / Non-governmental - Organisation focused on working with populations in conflict situations, natural disaster, and socio-economic hardship	1 (1)
<i>Community Leader</i>	Individual leader - Working with internally displaced persons in field	1 (1)
<i>FMHA - Federal Ministry of Humanitarian Affairs (Nigeria)</i>	Governmental - Office in charge of developing and coordinating humanitarian policies in the country	1 (1)
<i>JTA - Joint Task Force</i>	Intergovernmental - Multinational military task force acting across Benin, Cameroon, Chad, Niger, and Nigeria	1 (1)
<i>Justice, Peace and Development Commission</i>	Non-profit / Non-governmental - Faith-based organisation working with local communities in Nigeria	1 (1)
<i>Ministry of Women Affairs (Nigeria)</i>	Governmental - Office in charge of advising the Nigerian government on Gender and Children issues	1 (1)
<i>NEMA - National Emergency Management Agency (Nigeria)</i>	Governmental - Federal office in charge of managing emergencies and disasters	1 (1)
<i>NIMC - National Identity Management Commission (Nigeria)</i>	Governmental - Office in charge of regulating matters of national identity in Nigeria, including identification issues	1 (1)
<i>Norwegian Refugee Council</i>	Non-profit / Non-governmental - Humanitarian organisation working with displaced persons world-wide	1 (1)
<i>Plan International</i>	Non-profit / Non-governmental - Organisation working on children's rights and equality for girls world-wide	1 (1)
<i>Salient Humanitarian Organisation</i>	Non-profit / Non-governmental - Humanitarian organisation working on IDP's self-reliance, sanitation, and shelter in Nigeria	1 (1)
<i>Save The Children</i>	Non-profit / Non-governmental - Humanitarian organisation working on Children's rights world-wide	1 (1)
<i>SEMA - State Emergency Management Agency - (Borno, Nigeria)</i>	Governmental - Borno State's office in charge of managing emergencies and disasters	3 (3)
<i>UNFPA - United Nations Fund for Population Activities</i>	Intergovernmental - United Nations sexual and reproductive health agency	2 (2)
<i>WHO - World Health Organisation</i>	Intergovernmental - Organisation working on expanding universal health coverage, part of the UN system	1 (1)
<i>Youth Leader</i>	Individual leader - Working with young internally displaced persons in field	1 (1)
	Total	20 (20)

Figure 1: IDP age distribution (Nigeria)

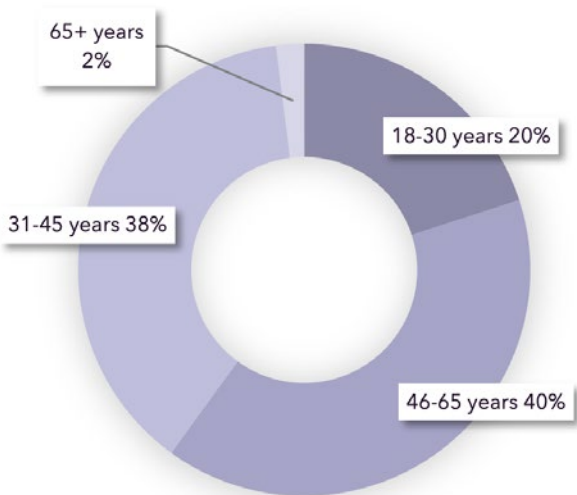


Figure 2: IDP location and age distribution (Nigeria)

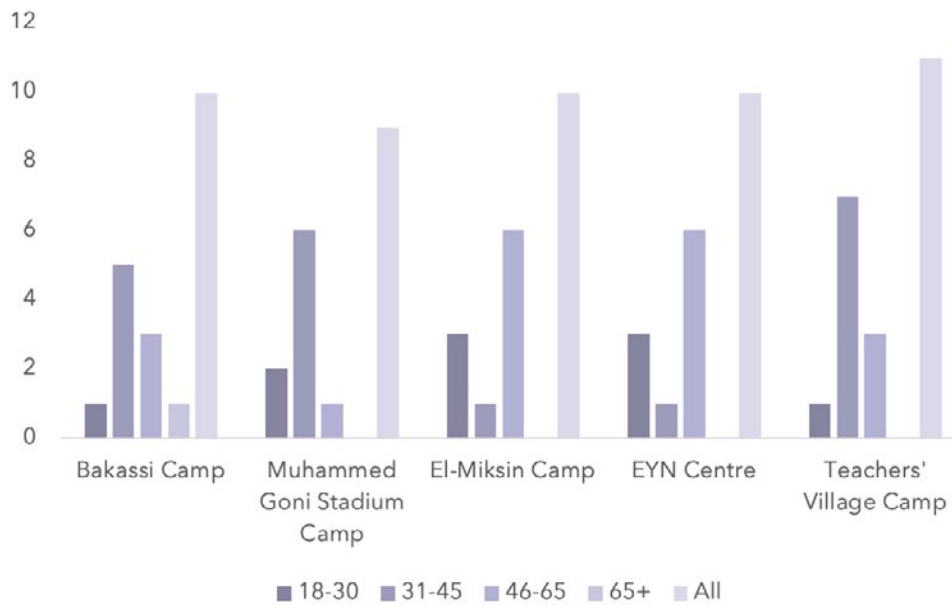


Figure 3: IDP location and gender distribution (Nigeria)

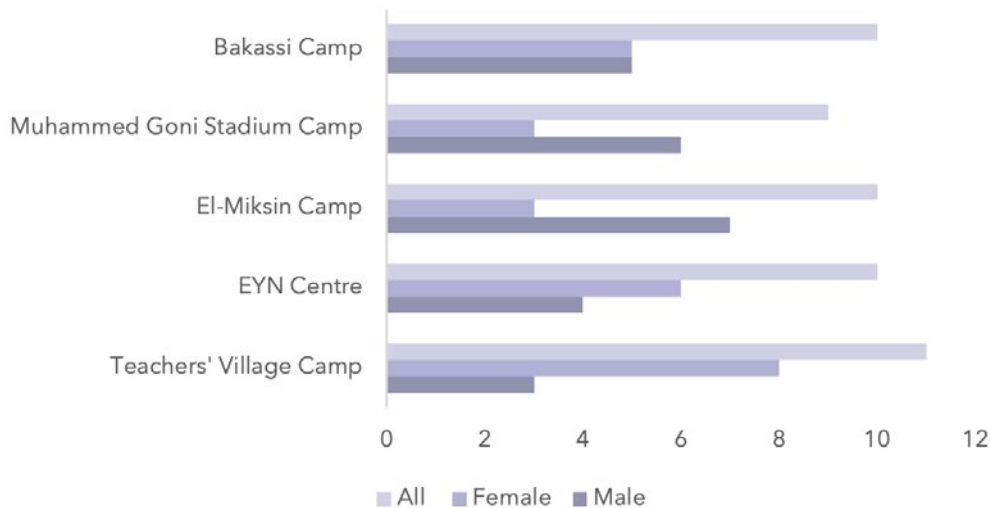


Figure 4: IDP location and faith (Nigeria)

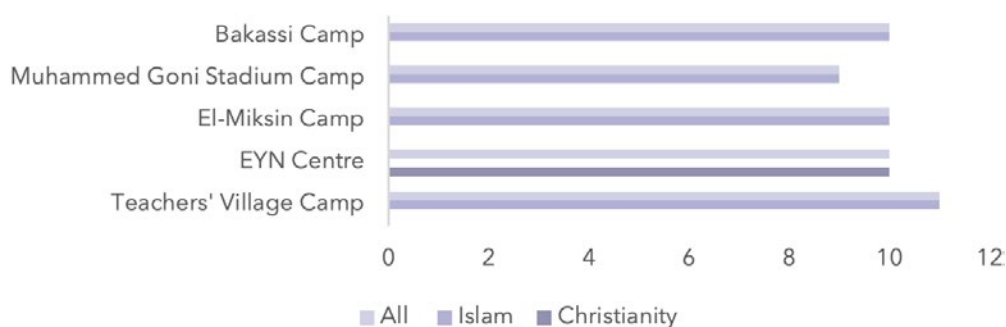
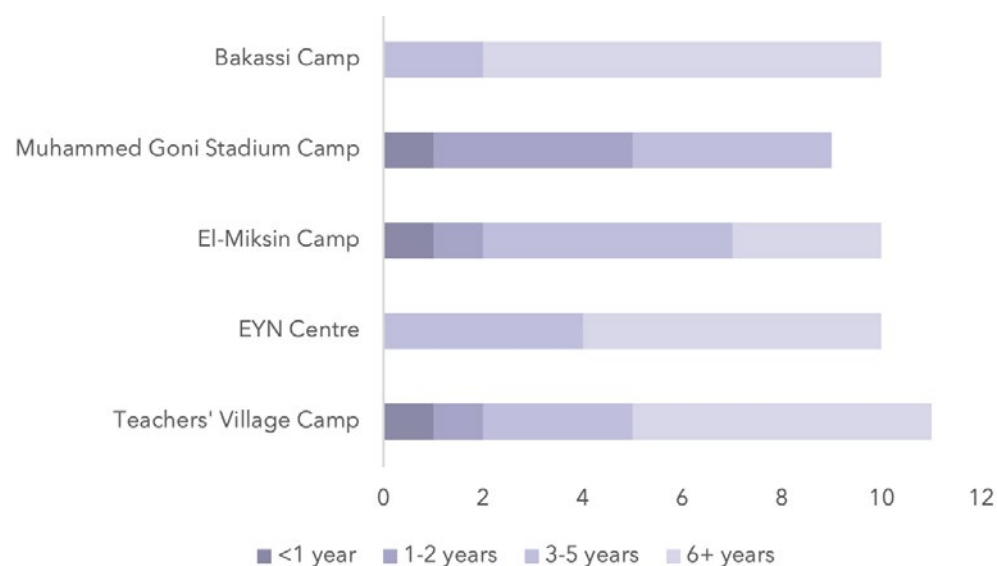


Figure 5: IDP duration in camp at time of the interview (Nigeria)



Camp-like settings in South Sudan

The analysis of data-driven humanitarianism in **camp-like settings in South Sudan** for Section 6 is based on a series of 70 in-depth qualitative interviews in two camps, one in Juba and one in Bentiu. A total of 50 interviews were undertaken with IDPs and 20 with stakeholders and practitioners working with IDPs in the region. Interviews were semi-structured and were undertaken face-to-face in two phases to enable a review of initial interview data and questions. A total of 15 interviews were carried out in phase one, from April to June 2021, 10 with IDPs and 5 with stakeholders. A further 55 interviews were carried out from October to November 2021, 40 with IDPs and 15 with stakeholders. On average, interviews lasted around one hour, with questions for IDPs focused on displacement experiences, camp conditions, data collection and use, and the project’s visualisation materials. Questions for stakeholders focused on organisational background, data collection and use, efficacy and ethics of humanitarian assistance, and the project’s

visualisation materials. Flexibility was maintained in the questioning to allow research participants to elaborate on areas of concern or to raise new issues, as relevant to their experience and expertise. Stakeholder participants were recruited using a purposive sample strategy to provide a range of perspectives across key agencies and sectors, while IDPs were recruited to ensure a diverse sample of gender and age across the two camps. Members of the research team recruited research participants directly.

Table 3 provides an overview of the agencies and organisations from which stakeholders were recruited for the interviews. It includes the number of participants from each organisation interviewed and the number of interviews in brackets. All interviews were individually based. Figures 6-10 provide a breakdown of our IDP sample across both phases of the research according to age (Figure 6), age and location (Figure 7), location and gender (Figure 8), location and faith (Figure 9), and duration of time at the camp at the time of interview (Figure 10).

Table 3: Stakeholder organisations and research participants (South Sudan)

Name	Role	Participants (interviews)
<i>CCO - Children Charity Organisation</i>	Non-profit / Non-governmental - South Sudan-based organisation working on child protection in Unity State	2 (2)
<i>Dialogue and Research Institute</i>	Non-profit / Non-governmental - South Sudan-based organisation working on human rights, peacebuilding, justice, and democracy	1 (1)
<i>Displacement Tracking Matrix (IOM)</i>	Intergovernmental - IOM-led system to track and monitor displacement and population mobility	1 (1)
<i>IOM - International Organization for Migration</i>	Intergovernmental - International Organisation for Migration, part of the UN system	1 (1)
<i>IRC - International Rescue Committee</i>	Non-profit / Non-governmental - Organisation working with refugees and displaced persons world-wide	2 (2)
<i>NPF - Non-violent peace force</i>	Non-profit / Non-governmental - Organisation working on peacebuilding with communities world-wide	1 (1)
<i>NSDO - Nile Hope Sustainable Development Organisation</i>	Non-profit / Non-governmental - South Sudan-based organisation working on the humanitarian response in the region	2 (2)
<i>Research Initiative</i>	Non-profit / Non-governmental - Organisation working on influencing social public policy-making	1 (1)
<i>State Relief and Rehabilitation Commission</i>	Governmental - Operational arm of South Sudan's Ministry of Humanitarian Affairs and Disaster Management	1 (1)
<i>UNHCR - United Nations High Commissioner for Refugees</i>	Intergovernmental - United Nations' Refugee Agency	2 (2)
<i>UNSA - Upper Nile Sports Academy</i>	Non-profit / Non-governmental - Organisation using sports to promote talent at the early ages, education to create awareness, psychosocial support, and vocational training.	2 (2)
<i>WAV - Women Aid Vision</i>	Non-profit / Non-governmental - South Sudan-based organisation working with women and youth for peace, and advocating against gender-based violence	1 (1)
<i>Welt Hunger Hilfe</i>	Non-profit / Non-governmental - Organisation working on fighting hunger world-wide	1 (1)
<i>Women Vision</i>	Non-profit / Non-governmental - South Sudan-based organisation working with women and girls' access to rights	2 (2)
Total		20 (20)

Figure 6: IDP age distribution (South Sudan)

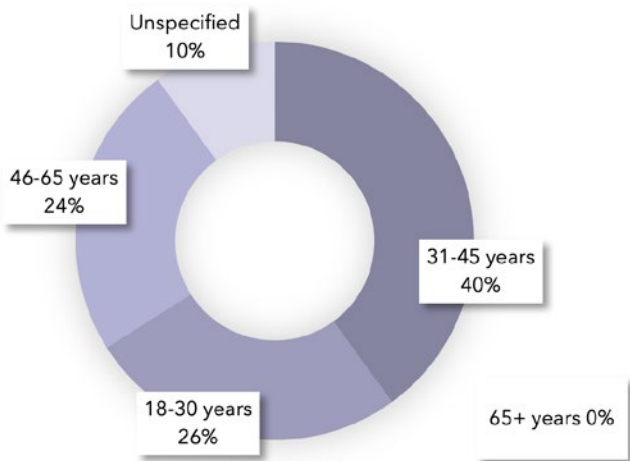


Figure 7: IDP location and age distribution (South Sudan)

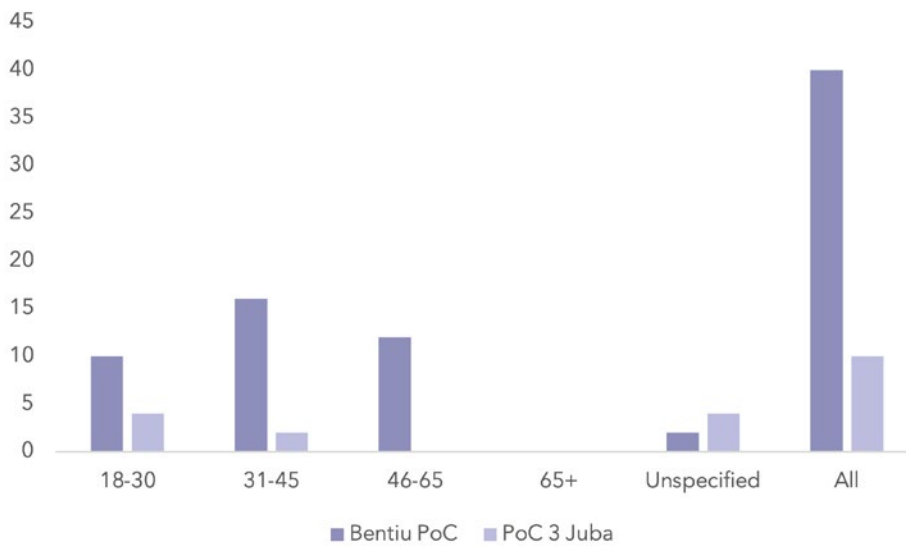


Figure 8: IDP location and gender distribution (South Sudan)

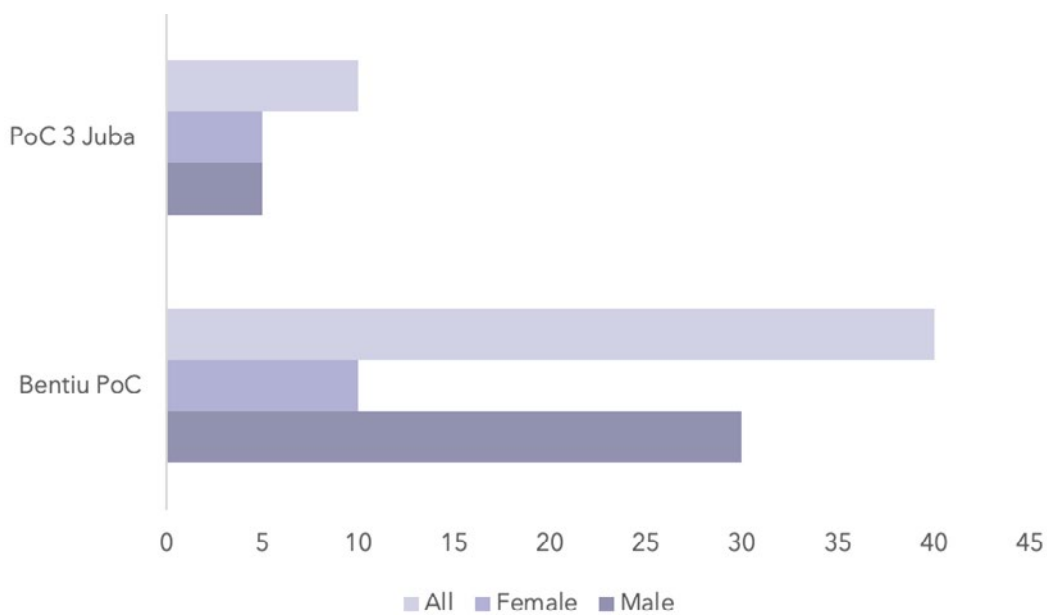


Figure 9: IDP location and faith (South Sudan)

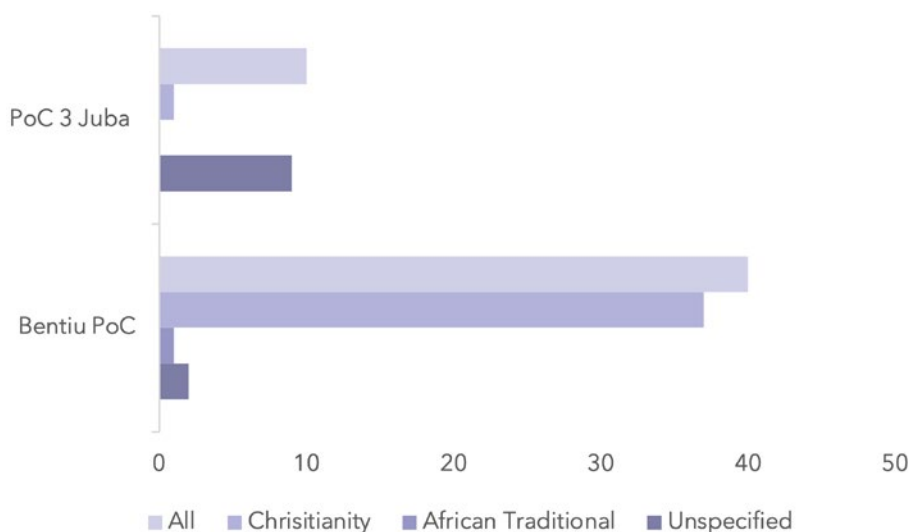
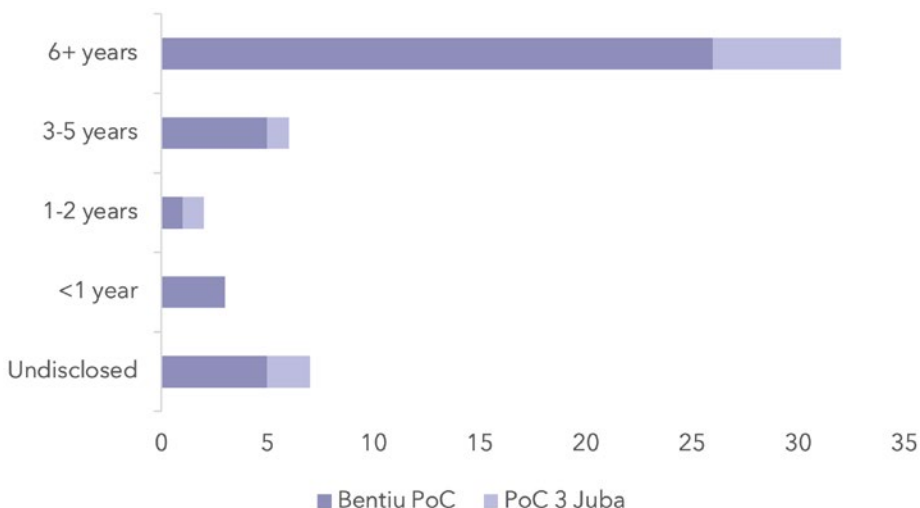


Figure 10: IDP duration in camp at time of the interview (South Sudan)



Interview coding

Most interviews carried out for this project were digitally recorded and subsequently transcribed verbatim in full. Some participants in South Sudan preferred not to be recorded, so detailed notes of those interviews were transcribed for analysis. All transcripts were coded with NVivo software and were analysed thematically using a coding frame that was developed interpretively through each phase of the research. Key themes were identified prior to interview for each of the categories of interviewee (humanitarians, regional stakeholders, IDPs), and embedded in the interview schedule, as indicated above. Themes were revisited following each phase of interviews, and were revised and expanded upon through an iterative interpretive process. Interviews are referenced within the report based on the work package (WP) that carried out the work: WP2

- Section 3 (humanitarians); WP3 - Section 5 (Nigeria); WP4 - Section 6 (South Sudan).

Interviews with humanitarians for WP2 were carried out in one phase and with representatives from a range of agencies and organisations. References to specific interviews identify the type of representative, followed by the work package and interview reference. For example, this is represented as (Donor representative, WP2.02). Representatives include donors, IOs (International Organisations), UN agencies, INGOs (International Non-Governmental Organisation), think tank representatives, etc. (see Table 1).

Interviews with stakeholders and IDPs in Nigeria and South Sudan for WP3 and WP4 were carried out in two phases with both regional stakeholders and with

IDPs, at different camps. The work package reference (WP3 or WP4) is followed by SH (for stakeholders and practitioners) or IDP (for IDPs), followed by the phase (01 or 02) and the interview number. For example, this is represented as (WP3.SH.02.09) and (WP4.IDP.01.06).

Ethical considerations

Prior to fieldwork, a **rigorous process of ethical scrutiny** was undertaken involving the review of the proposed research, interview schedules, and consent forms by the University of Warwick Humanities and Social Sciences Research Ethics Committee. A similar process was also undertaken at the University of Ibadan. The project interview questions, information sheet, and consent form (which allowed for oral consent) were carefully drafted and agreed upon by the whole team. Prior to embarking on fieldwork, researchers were provided with information and training on the conduct of interviews in accordance with ethical and data rights principles, while being offered advice on how to handle difficult or challenging situations or questions from interview participants. Risk assessments were conducted for each location and researcher safety remained a key priority throughout. Collected data and transcripts were anonymised and stored on the University of Warwick server, in accordance with best practice.

Beyond formal ethical review, the research also facilitated **reflection on fundamental ethical issues** surrounding research on displacement, including the use of terminology in the field, ethical questions and concerns raised during research design of the project through to final dissemination, and the collation and use of data in IDP camps.



From the outset, we identified the importance of clarity about the use of specific terms, in particular: “ethics”, “humanitarian ethics”, “data ethics” and “data responsibility”. While researchers and practitioners often assume that usage of terminology is the same for all, this is not the case, and there are many approaches to “ethics” and to the different categories of ethics, such as “research ethics” (e.g. see Clark-Kazak, 2019), “humanitarian ethics”, and “data ethics” (e.g. see OCHA, 2020). In the area of forced migration research, the International Association for the Study of Forced Migration provides a helpful Code of Ethics with several core principles (IASFM, 2018). These have helped direct the research on the project, with the concept of “**doing no harm**” lying at the heart of our fieldwork.

Recent years have seen an increasing consensus about the meaning of “humanitarian ethics” (Slim, 2015), and the Red Cross/Red Crescent were early adopters of four key humanitarian principles: humanity, impartiality, neutrality and independence. These, too, have been incorporated into a more comprehensive Code of Conduct (IFRC and ICRC, 2021), as well as a Humanitarian Charter (The Sphere Project, 2000), for those engaged in humanitarian action and disaster response. Equally, the rise in data and new forms of data acquisition have necessitated greater analysis of “data” and “data responsibility” and, as with ethics, guidelines have emerged, such as the Data Responsibility Guidelines published by the Office for Coordination of Humanitarian Affairs (OCHA, 2021) and the Inter-Agency Standing Committee Operational Guidance on Data Responsibility in Humanitarian Action (IASC, 2021).

The current context is, thus, one in which humanitarian and international organisations, including the UN, have developed extensive information, guidance and training on ethics and data, including in how data is processed in advanced models (DSEG, 2020). The *Data and Displacement* project is extremely timely and as a team we have been able to reflect critically on the ethical and operational implications of data-driven humanitarian assistance in situations of ongoing conflict and displacement, with particular emphasis on the following questions:

- ▶ How does the collection and use of data impact IDPs in north-eastern Nigeria and South Sudan?
- ▶ How are IDPs who are vulnerable/most vulnerable identified and classified?
- ▶ What does informed consent mean in the context of IDP camp-like settings?
- ▶ What ethical guidelines are followed, if any?
- ▶ Do participants fully understand the aims of data collection and its use?
- ▶ Can IDPs access their data and all the relevant information on which decisions are made about their support?

- ▶ Can compromise be avoided in humanitarian contexts if data needs to be used quickly?
- ▶ What about the realities of follow-up? Is it important to 'give back' to communities following research and how is this best achieved?
- ▶ How is data stored and is it appropriate and consistent?

Our findings identified issues in relation to many of these questions. This indicates that, despite knowledge and training in the humanitarian field on key codes of conduct and despite a series of guidelines and principles relating to the ethics of humanitarian activity and to the collation and use of data, these are not always adhered to in practice. While IDP camp-like settings involve complex and challenging circumstances, there are nevertheless significant areas requiring improvement. As a project team, we worked to challenge some of these limitations by engaging a participatory ethos at the core of the project's approach (Squire et al, 2021).

A participatory ethos

While *Data and Displacement* examines the impact of data-driven humanitarianism on marginalised IDP populations, it does not assume that marginalisation renders IDPs powerless in the process of generating knowledge about the conditions of displacement, humanitarian assistance, and the role of data in targeting such assistance. As a research team our shared commitment has been to generate knowledge that neither leads to the further marginalisation of IDPs, nor that is complicit in existing processes of marginalisation.

On this basis, we embedded **a participatory ethos** as a central dimension of the project, meaning that our aim has been to engage with and advocate for the views of IDPs themselves. This represents a shift away from extractive forms of research towards the generation of spaces whereby the voices of IDPs themselves can come to the foreground in discussions about, and outputs concerning, the production and use of their data. We have remained committed throughout the project to raising awareness of, and working against, processes involving 'dispossession by data', which can emerge from research models based on Global North frameworks and approaches.

Participatory research is context specific, and requires flexibility in terms of the methods chosen, the contexts in which the research is undertaken, and the different communities about which, and with whom, the research is conducted. This requires humility, an awareness of and willingness to challenge any assumptions that might be taken into the research, as well as a bottom-up and collaborative approach (Abimbola et al, 2021b). Research undertaken in this manner may be less linear



and less predictable, as we as researchers continually learn and unlearn our approaches.

This project's importance lies in its concern with 'datafication' of the humanitarian field, a move which has been criticised for eclipsing the voices of those in need of humanitarian assistance, including IDPs. However, our research indicates that the humanitarian sector is increasingly taking these concerns seriously (Section 3). Our research also emphasises that human rights-based and people-centric approaches to humanitarianism demand a participatory ethos, which centre displaced persons in processes of data collection and humanitarian targeting (Alozie and Squire, 2021).

Undertaking research in contexts of conflict and in extreme precarity demand enhanced reflection. Dynamics of power between the researcher and the researched are heightened, and IDPs can suffer from research fatigue due to large numbers of assessments by humanitarian practitioners. Research ethics guidelines are generally developed with relatively predictable contexts in mind and are not well adapted to the contexts in which we conducted research. Cognisant of these challenges, our methodology was designed to enable two-way interaction between researchers and research participants, as well as to provide IDPs with useful information relevant to their data collection experiences. As part of our interviews with IDPs, and with regional stakeholders and practitioners involved in the provision of humanitarian assistance in north-eastern Nigeria and South Sudan, we shared data visualisations which we designed to represent the journey of IDP data (see Section 4). When used correctly, visualisation tools can empower and

educate communities and increase awareness. It is with these transformative aims in mind that we included the use of one of our data visualisations as part of our methodology during fieldwork in Nigeria and South Sudan.

Using data visualisations in contexts of insecurity, marginalisation, and deprivation has proved to be both illuminating and challenging. As indicated above, the IDPs we interviewed often articulate an interest in knowing more about why and how their data is collected, stored, and used for humanitarian decision-making. While one challenge in realising such interest is the lack of data literacy of IDPs, our research also exposed complex relationships of authority, fear, and need, which prevented IDPs from asking probing questions of humanitarian data collectors. In such a context our data visualisations provided important knowledge while also generating a space for the IDPs to ask questions and reflect on the data journey. However, it was sometimes difficult for the IDPs to understand or engage with the data visualisations and we observed differences among the IDPs in terms of their ability to use and reflect on them.

These experiences prompt important questions when reflecting on the ethical considerations of undertaking participatory research with IDPs:

1. Who are we inviting to participate and who is able to accept?
2. Who is going to benefit from the research?
3. What comes *after* participation?

To avoid the dangers of participatory research as a 'tick box' exercise it is important to acknowledge that we did not include all IDPs in our research, nor were we necessarily able to engage a representative sample of all IDPs at the sites under investigation. Our research, while having important impact potential, will not necessarily improve the situations of the specific IDPs who participated in our research in any direct sense. This demonstrates the difficulty of fully escaping more extractive modes of research. We employed more interactive modes of dissemination both in Nigeria and South Sudan, holding events to which the IDPs we interviewed were invited, which were designed to return data to IDPs directly. Ethical considerations throughout the project cycle – design, implementation, dissemination – underscore the importance of a thoughtful and deliberative participatory research design which is continually under revision. In this sense participatory research is very much an ongoing process of negotiating participation, between the research team and the IDPs, and between the team itself.

Theory of change

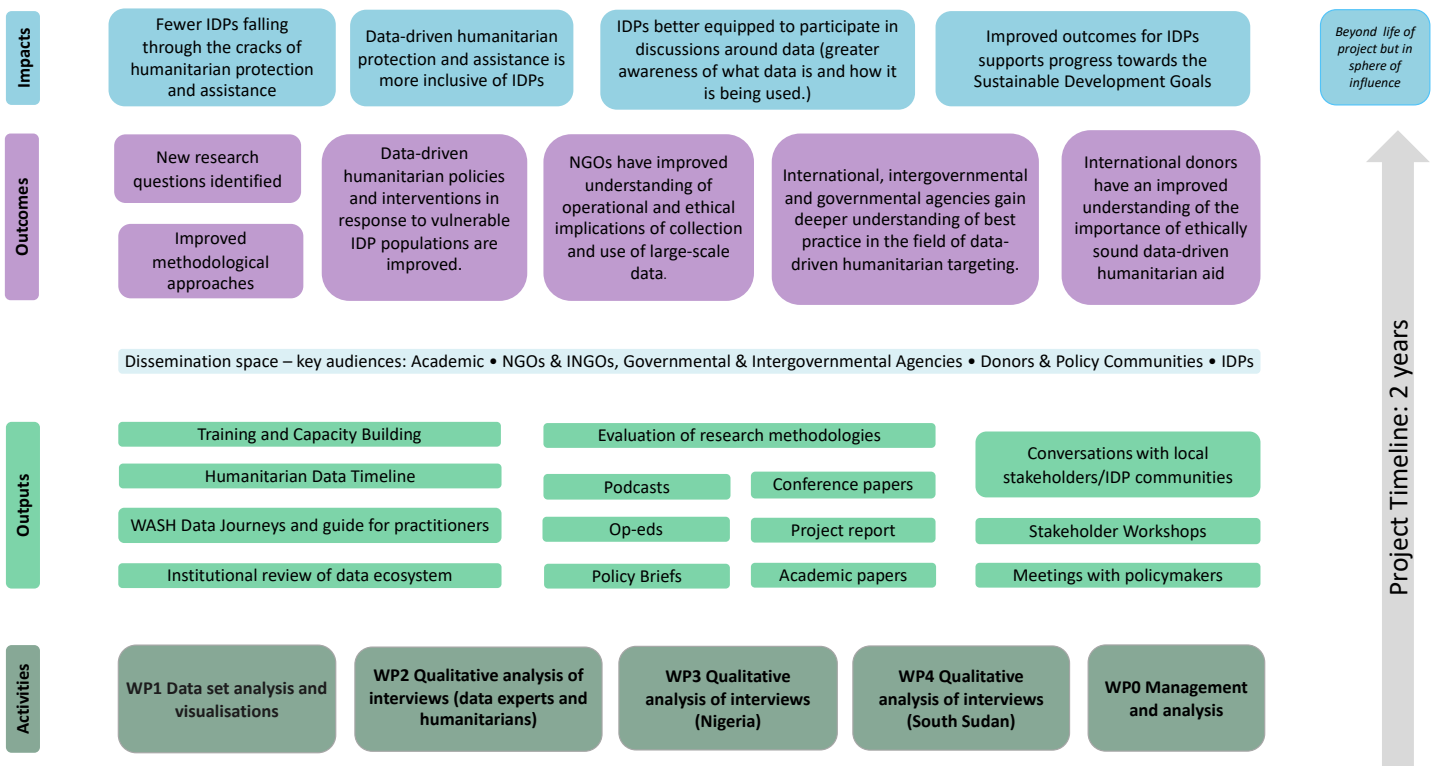
Theory of Change thinking has been used throughout the life of the project to support the research team to reflect on change processes and pathways to change. While Theory of Change is not a prescriptive model, it is a way of articulating how change happens in a particular context, clarifying a project's role in **contributing to change** and defining and exploring critical assumptions.

For this project, we focused on making our expectations of change clear. This was particularly useful in the early stages of the project as the multidisciplinary team explored different perceptions of change and how they related to the project and the specific contexts of Nigeria and South Sudan. In the later stages, the Theory of Change has been useful in prompting discussion around dissemination of the research outputs, focusing on who needs to know what we have learned to increase our chances of making a positive contribution towards the longer-term impacts envisaged by the team.

Diagram 1 is a simplified and indicative version of the diagram we have used as a basis for reflection. It highlights the key project activities across the bottom, organised in relation to the four key work packages (WP1, WP2, WP3, WP4), and the overarching work package on project management and analysis (WP0). Outputs are listed in green just above the activities, representing the work carried out by team members throughout the course of the project. These outputs are targeted at a range of audiences: not only academics, but also NGOs and INGOs, governmental and intergovernmental agencies, donors and policymakers, and IDPs themselves. The outputs are all broadly orientated toward a broader set of outcomes (in purple) and impacts (in blue), which relate to the inclusivity and ethics of data-driven humanitarianism and the data literacies of multiple actors (see Detailed recommendations section).

The Theory of Change has been used as **a process rather than a product**, valuing a dialogic approach over one that is rooted in indicators. This approach suited the research team, who used discussions to consider change in the context of their own work packages, as well as across the project as a whole. Several versions of the diagram have been developed and used throughout the project as it evolved.

Diagram 1: Project theory of change



3. DATAFICATION OF THE HUMANITARIAN SECTOR

The role of data and analysis within humanitarian operations has changed and evolved considerably over the past 20 years. As with other sectors, there has been **rapid datafication** with a push for **data enhanced decision-making**. At the same time, humanitarians have begun to address the ethical issues and risks associated with operational data management and the potential harms caused to affected populations, albeit at a slower pace than the drive toward datafication.

The *Data and Displacement* team undertook **in-depth qualitative interviews** with a total of 42 international data experts, donors, and humanitarian practitioners from a range of governmental and non-governmental organisations, to further assess ethical concerns and issues related to the efficacy of humanitarian data arising within the sector. Interview questions probed understandings of humanitarian data and of how the sector has evolved, as well as understandings of the impact of data on decision-making, and the role of innovation and technology in the ethics and efficacy of humanitarian data. Particular attention was paid to issues of inclusivity and the potential for harm arising through the development of data-driven humanitarianism. Interviews were complemented by a **participatory workshop** with experts and practitioners in Geneva in November 2021, which led to the co-production of a humanitarian data timeline (see Visualisation 1).

Key findings identified through our research with humanitarians are:

- ▶ Humanitarian data is an ever-evolving term with no set definition. While some actors recognise similar characteristics in the data used for humanitarian purposes, its scope has been broadened with the use of new data acquisition modalities.
- ▶ In this context, two contradictory narratives have emerged: one that suggests there are persistent data gaps in the humanitarian sector, and the other which posits there is too much data.
- ▶ Compounded by the upward movement of data (or the donor-driven demand for data), data has become an increasingly competitive space for humanitarians, who vie for funding, visibility, and reputational power.

- ▶ A series of tensions have also arisen around the quality versus the quantity of data collected, which can detract from more fundamental questions about how far and in what ways data informs decision-making.
- ▶ While the role of technology in improving humanitarian data systems is widely acknowledged, the development of new modalities of data collection necessitates novel ways of translating the imperatives of data responsibility and accountability into effective and ethical operational practices.

Humanitarian data

Practitioners in the field define humanitarian data in a range of different ways, pointing to the ever-evolving nature of the term and the difficulties of delineating the boundaries of what counts as humanitarian data. On the one hand, this can refer to data collected for humanitarian purposes by humanitarian actors whilst, on the other, the term can refer to data that forms part of a process of humanitarian decision-making:

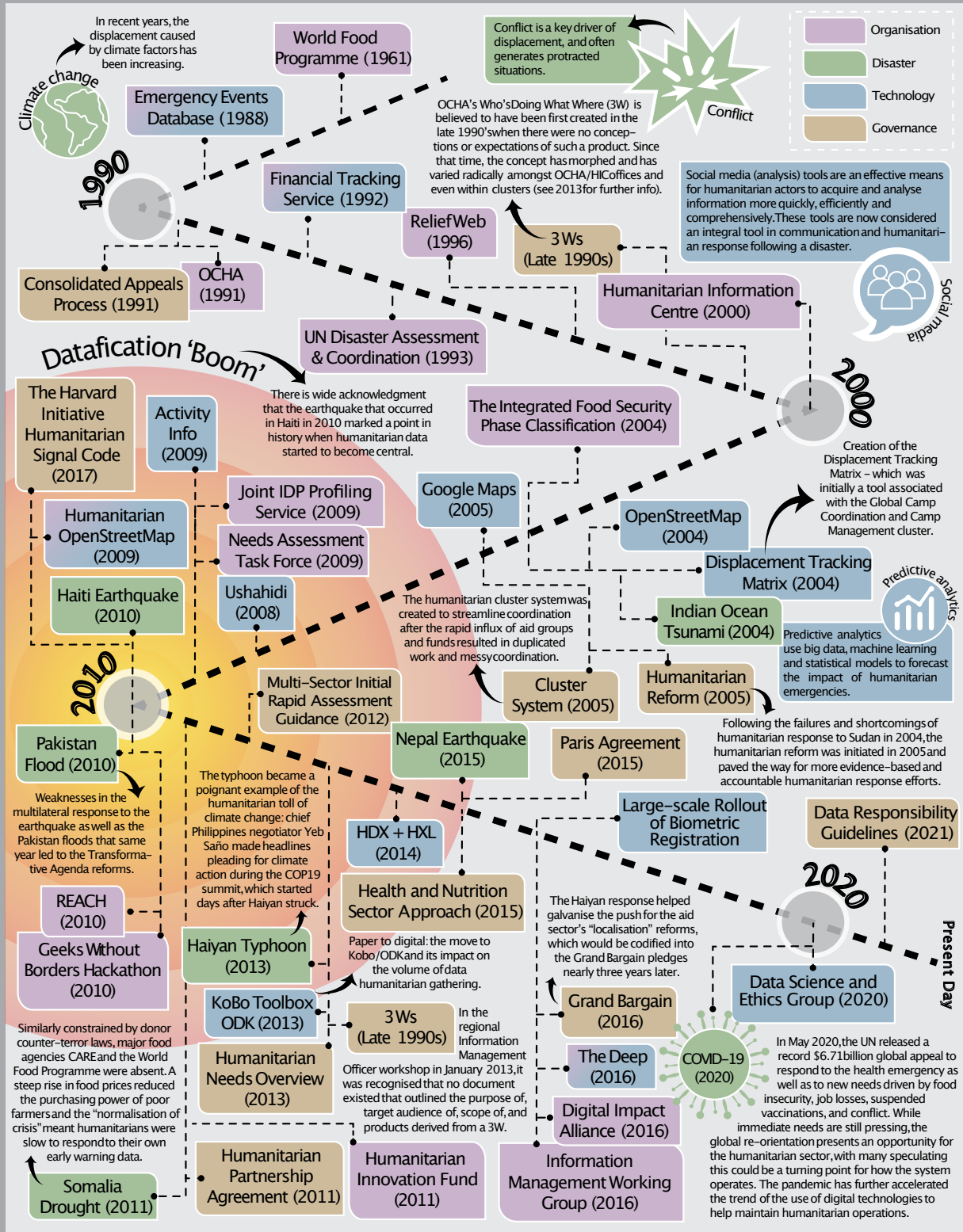
...there's kind of broad sense and narrow sense. [In a] broad sense I would consider humanitarian data any data that is used as an input for making humanitarian decisions, so that can be humanitarian-specific data, or it can be information such as administrative boundaries or census data, whose initial purpose may not be for humanitarian purposes, but are still used as inputs into humanitarian decision-making. Then in the



Visualisation 1: Humanitarian data timeline

Evolution of the Humanitarian Data Ecosystem

This infographic displays some historical events and changes that have shaped the evolution of the humanitarian data ecosystem (HDE). This includes key organisations, cataclysmic events such as pandemics or natural disasters, developments in technologies or innovation and improvements in governance and policy. The events are indicative of those relevant to the HDE and are not inclusive of all humanitarian events for the time periods shown.



This work forms part of the 'Data & Displacement' project: jointly funded by the UK Arts & Humanities Research Council (AHRC) and the UK Foreign, Commonwealth & Development Office (formerly UK Department for International Development - DFID), under the Collaborative Humanitarian Protection Programme.



make sense of it all... we need to move from a place of data to a place of analysis and more information, useful information, rather than pure data. And we are doing that I think as a sector and [it's] just still a work in progress (INGO representative, WP2.10).

In this context, two seemingly contradictory narratives have emerged: one that suggests there are persistent data gaps in the humanitarian sector, and the other which posits there is too much data:

...how much data is too much and how much is not enough, and what's the right data and how are we using it? I feel like all of those discussions have not always been there ...there is this sort of desire for endless data collection and just endless like extractive processes of how much can we learn about a humanitarian situation, and then where all that data goes and to what extent it gets used sometimes is a bit hard to understand (INGO representative, WP2.25).

...whose data is missing? ...we see a lot of data being used to make big protection decisions where you know, a lot of people who sort of have the most to lose from a protection strategy are not heard at all (INGO representative, WP2.25).

The question of whether it is preferable to collect more or fewer data from an ethical and operational perspective emerges here as a complex and contested one. Nevertheless, these contradictory narratives can be seen as coming together to generate the demand for more data - whether to fill gaps or to ensure better quality data. In this context, some of our interviewees point to more fundamental questions about the appropriate use of data once it is collected:

...there are a lot of data collection in use activities that aren't really use activities, right, they're just data collection for the performative dance ... look, we're collecting and using data ... donors just want to see that people are collecting data or that organisations say that they're being data-driven or evidence-based; they don't check in any kind of detail the quality of that data practice or whether it's actually being used (INGO representative, WP2.05).

It is here that we can see the problems of an upward-flow of data to donors, and the predominance of data use for the purposes of making funding decisions, over decisions at the operational level. Indeed, particularly notable in our interviews with humanitarians is that donor-driven practices of data collection are widely recognised as problematic.

Donor-driven data practices

The **competitive dimension of the humanitarian sector** is an issue that a range of our research participants point to:

I see competition within the sector driving data hugely. Everybody will have to be seen as having the best data. It's linked to visibility. It's linked to really who has the leading role. Who is the lead on the ground? UN agencies particularly? And I think there's definitely a thing there about UN agencies. Of course, it's always been the [case in the] NGO world. And it's also in the donor world. Donors want to be seen as leaders. There are countries [that] want to be seen as leaders... So, we're all pushing data in different ways that actually support our own objectives. And I think that's driven a certain amount of the data. I do think also technology has definitely helped us a lot. We have better means of getting quick data now. We have a lot more opportunities to get data quickly. And whoever gets it out first has an upper hand in terms of getting more funding... the reputation of issues linked to it, so I think there's so many issues that are linked to that (INGO representative, WP2.17C).

...as a donor, I suppose you don't want to put yourselves at the top, but you're that money, so that flows down... You create the incentives and demands as a key user (Donor representative, WP2.02).

...data is being used also like flag hunting, right. It's a territory marking in a way, and I don't know whether this is helping us work together better (UN Agency representative, WP2.22).

One aspect that is particularly striking in our interviews with humanitarians is the predominance of a **critical attitude toward data production and use** within the sector. Some seek to defend the humanitarian community in this context, while others are more self-critical:

I think we tend to be bashed as agencies, I think a lot of this comes from the donors and their policies, let's not pretend that we set the rules, we don't, we respond to incentives (UN Agency representative, WP2.18).

...almost all humanitarian data is structured to benefit humanitarians, and we probably claim, okay, our programming is then therefore benefitting affected people and that's how we justify the focus, but at the end of the day it's data for us and for our purposes... it's an economy that is built around this data, right, sort of politics and governance built around those data yet effected people don't really see tangible results of it (INGO representative, WP2.16B).

The upward movement of data (or the donor-driven demand for data) is seen here as problematic in the sense that it has generated further competition between humanitarian agencies, which increasingly mobilise data to vie for funding, visibility, and reputational power. With donor accountability and auditing often viewed within the humanitarian community as more prominent a focus than accountability to affected communities, more fundamental questions appear to be lost regarding how far and in what ways data informs decision-making.

Quality versus quantity

In a context marked by competitive humanitarian data practices and rapid technological advance, the production of large-scale quantitative data has taken on increasing significance:

I think quantitative data, because it's quite comforting, it seems objective. It's like this benchmark at the expense of qualitative ... we've got loads of anecdotal qualitative information that is good enough, but maybe no structural way of presenting it and procuring it (Donor representative, WP2.02).

While quantitative data is influential in the humanitarian sector, it is nevertheless relatively widely recognised that qualitative data has become increasingly overlooked in terms that can be detrimental to the sector:

I think today when we talk about humanitarian data, we tend to refer to quantitative data, where historically that term may have been taken ... a more qualitative nature and thinking. So, today when you say humanitarian data, people tend to think numbers and statistics. You know, that's a reflection of how, you know, the volume of data and the technological advancements, and how we approach information collection has changed over time. So, today, it tends to be quantitative, although it's something that I push back at a lot because, you know, we hear this all of the time. The numbers without the story behind them and without that richness really don't tell us much at all. So, you know, I feel like it's a bit of a rubber band that keeps bouncing back and forth between the quantitative and qualitative tension, and finding that balance is tricky (UN Agency representative, WP2.01).

Large-scale data acquisition and technological advances are described here as generating far-reaching changes in data practices within the humanitarian sector. Yet, questions nevertheless arise about the impact of such data on decision-making:

I do question the extent to which it has necessarily massively impacted decision-making. This is a very broad observation, but I think a lot of decision-making is still fundamentally wasted in politics. And I feel data, especially assessment data can often be used to make justifications about decisions that already been made (Thinktank representative, WP2.05).

Tensions around the quality versus the quantity of data detract attention from difficult questions surrounding **the politics of humanitarian decision-making** and the role that data plays in such processes. Debates over the quantity versus the quality of data also detract attention from how accountability to donors is prioritised over accountability to affected communities.

Data responsibility and accountability

While many humanitarians accept that technological advances have the capacity to improve humanitarian data systems, the impact of such advances are also seen as generating a range of new pressures in terms of **data responsibility and accountability** within the sector:

...how do we actually live up to 'do no harm' if we don't know what the harm could be from releasing datasets openly, it's a really tough question (INGO representative, WP2.10).

Issues of data responsibility have become increasingly pressing within the humanitarian sector over recent years, as questionable data sharing practices and data breaches have come to light. Yet questions of accountability have also become pressing, particularly in relation to the communities from which data is collected:

...if someone's never gotten anything then we start asking them all these questions and then maybe they still don't get anything, so we sort of don't want to do harm in that sense (INGO representative, WP2.25).

Ethical questions arise here about the appropriateness of data collection where the likelihood of action is low, which often generates frustration on the part of IDPs (Sections 5 and 6). In this context, many humanitarians highlight the need to translate the imperatives of data responsibility and accountability into more effective and ethical operational practices, such as through the production of **interoperable data**. Others highlight issues related to participation:

I think that there can sometimes be this view that you know, if we include these individuals in data collection or collect more data on them that we've done the job of including them in programme design and I think you know, we need to actually move towards much more participatory formats for that and different ethical approaches to how we collect and use that data (INGO representative, WP2.05).

This emphasis on **participatory formats** as a means of enhancing the accountability and responsibility of humanitarians to affected communities resonates strongly with the participatory ethos of our project (see Section 2). As we will see in Sections 5 and 6 of this report, similar concerns also emerge from our analysis of the perspectives of IDPs and regional stakeholders. Before we explore these findings further, we will turn to the analysis of datasets and to the project's visualisation of the data journey.

4. VISUALISING THE DATA JOURNEY

The increased availability of digital data has generated a wealth of new opportunities for the humanitarian sector, offering the potential for improved humanitarian response strategies. However, datafication processes have also introduced the need to **reframe data collection, management, analysis, and ethics** to ensure equitable distribution of resources, prompt response times, and the effective protection of vulnerable groups.

The *Data and Displacement* team undertook an analysis of relevant datasets from the HDX open data sharing platform, to explore the coverage, accessibility, and interoperability of those that are directly related to the seven IDP camps in north-eastern Nigeria and South Sudan where our research was conducted. Datasets include site assessments, location assessments, and baseline assessments, and include a mixture of variables that are aligned with one or more of the eleven UN clusters (Protection, Camp Coordination and Management, Water Sanitation and Hygiene, Health, Emergency Shelter, Nutrition, Emergency Telecommunications, Logistics, Early Recovery, Education and Agriculture).

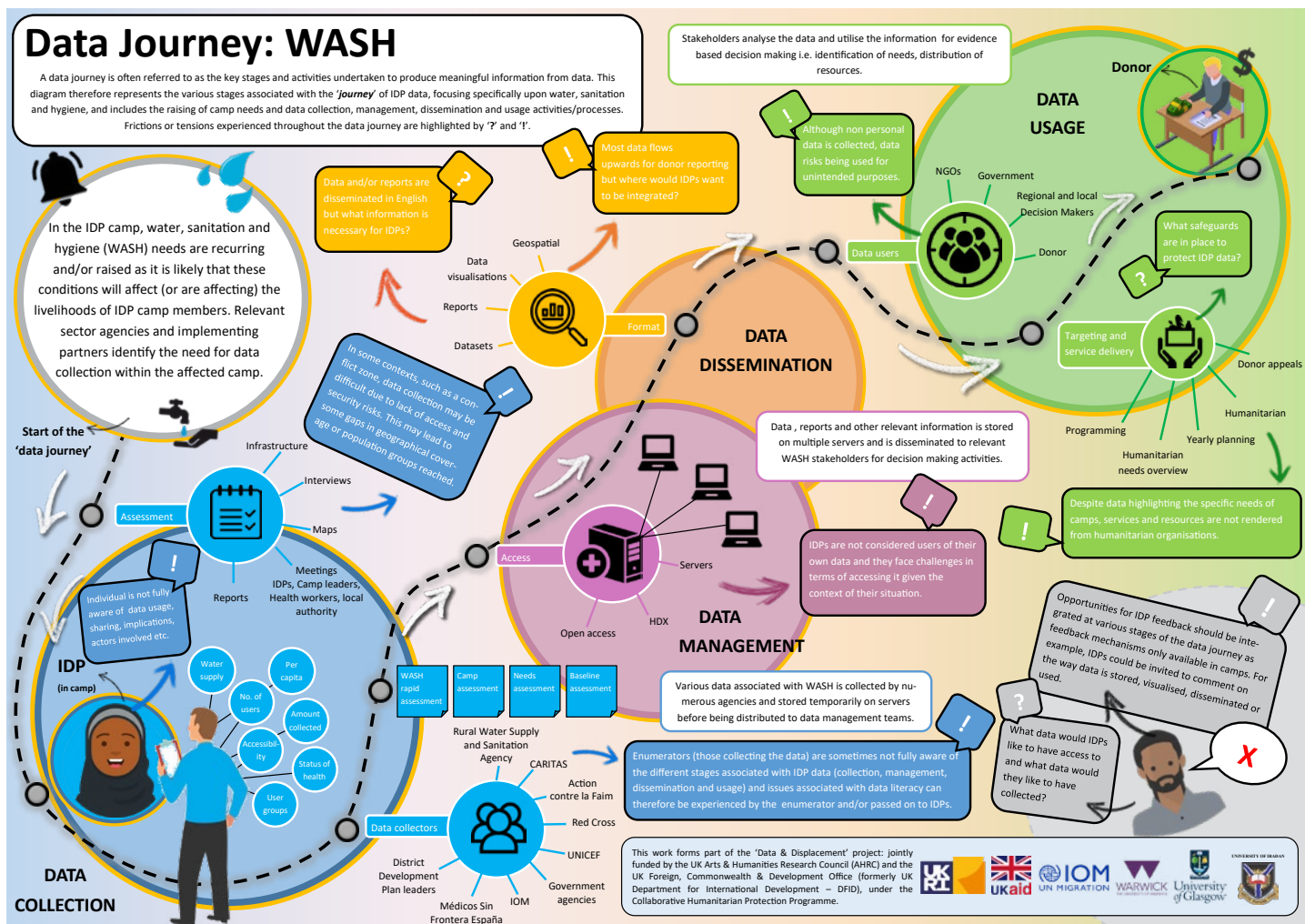
The dataset analysis was complemented by a review of the interview data from across our project, including with humanitarians (Section 3), and with local stakeholders and IDPs (Sections 5 and 6). Visualisation 2 is adapted from a preliminary visual representation of a hypothetical 'data journey', which was created for use during the second phase of our fieldwork in north-eastern Nigeria and South Sudan. The data journey was designed to inform and provoke discussion with IDPs and stakeholders about how IDP data is generated, thus enabling us to explore IDP and stakeholder understandings and experiences of data collection and use (Sections 5 and 6). We also sought to obtain feedback from our interviewees during our fieldwork on the usefulness of the visual representation of **how data moves through various stages**.

Visualisation 2 highlights the key stages and activities associated with the journey of IDP data throughout the Humanitarian

Visualisation 2: Simplified data journey



Visualisation 3: Complex data journey



Data Ecosystem (HDE) in relation to water, sanitation, and hygiene (WASH). This includes: (a) those involved with the raising of IDP needs; (b) key actors associated with the assessment of IDP needs; (c) specific tools used for assessing IDP needs; (d) the collation of primary and secondary IDP/humanitarian data; (e) essential organisational and legal processes; and (f) the distribution of WASH-related resources within camps. The data journey is an over-simplified version of reality and does not aim to be fully inclusive of all events/processes associated with WASH and/or the HDE, but rather aims to act as a pedagogical tool to improve awareness and guide both stakeholders and IDPs within camps.

Visualisation 3 represents the revised version of the data journey, which integrates insights from interviews with the multiple groups engaged in this project: international data experts, donors, and humanitarian practitioners from a range of governmental and non-governmental organisations; regional stakeholders and practitioners involved in the provision of humanitarian assistance in north-eastern Nigeria and South Sudan; as well as IDPs located in camps across the two regions. **Participatory**

workshops were also carried out in Geneva and Abuja with representatives from each of our research participant groups, to review the visualisation and to provide key insights into areas of friction surrounding the movement of data at different stages of the journey.

Visualisation 3 highlights the complex journey of IDP data as it moves throughout the various processes and systems involved with WASH within the HDE. The visual focuses specifically upon the upwards flow of data through five key stages, which highlight the initial driver for IDP data (recurring and/or raised WASH needs), and the numerous activities associated with IDP data collection, management, dissemination, and usage. The information shown on the visual has been influenced by project research findings and has gone through an iterative design process with feedback from stakeholders and IDPs via participatory workshops/ interviews. The figure therefore highlights frictions and/or tensions (depicted by the '!' and '?') experienced by stakeholders and/or IDPs throughout the data journey. Certain elements of the image have been chosen deliberately to highlight additional frictions experienced

within the system. For example, white-patriarchal members are depicted within specific stages of the data journey to signify hierarchical issues experienced by stakeholders and/or IDPs in the data journey. Please note that the image is only indicative of a select number of humanitarian processes and/or systems and does not aim to be fully inclusive of all activities associated with WASH efforts within the HDE.

What the data journey in Visualisation 3 indicates is that the needs identified based on data generated in the camp can provide a trigger for further data collection, but that a range of other considerations are already in play when the data journey 'begins'. It also shows that there are multiple data collectors and forms of data operating in IDP camp-like settings, as well as significant **gaps and frictions** at several moments in the trajectories of the data practices of collection, management, dissemination, and usage - particularly in contexts characterised by conflict and displacement, as is the case for the sites forming the focus of our research. The analysis of the data journey indicates that data is disseminated to relevant WASH stakeholders in various formats, but that access to data can be limited for affected communities. The journey also highlights the predominant upward orientation of the movements of data toward international agencies and donors, which is indicative of the donor-driven dimensions of humanitarian data, as highlighted in Section 3.

Feedback during our participatory workshops indicates that the data journey provides an **important pedagogical tool** for both practitioners and IDPs alike. Using our data journey visualisation as a starting point, IDPs and local stakeholders were able to reflect on their lived experiences with data collection practices and to discuss their expectations on what happens with their data, including how, by whom, and for what purposes the data is used. This reflects a broader finding from across the *Data and Displacement* project, regarding the importance of building data capacities and literacies in both IDP and stakeholder communities. Such efforts are not only important in ensuring that the collection and use of data is accurate, efficient, and limited rather than proliferating. They are also important in ensuring that affected communities adequately understand humanitarian data and are empowered to play an active role in shaping its collection and usage. We will further explore the importance of this in Sections 5 and 6.

5. CAMP-LIKE SETTINGS IN NORTH-EASTERN NIGERIA

Internal displacement has been a significant issue in the north-eastern region of Nigeria for the past two decades, where the activities of non-state armed groups have generated a range of challenges for the **2.2 million internally displaced** in the country. Based on data from OCHA, no less than 8.7 million of the 13.1 million population in insurgency areas of north-eastern Nigeria have been identified as requiring humanitarian assistance as of 2021, including 5 million children, 1.74 million women, and 1.4 million disabled people (OCHA, 2022a).

From 2021 to 2022, the *Data and Displacement* research team conducted **in-depth qualitative interviews in north-eastern Nigeria** with 50 IDPs across five camps in Maiduguri, Borno. We also interviewed 20 stakeholders and practitioners working with IDPs in the region to deepen our understanding of data-driven humanitarianism in contexts of internal displacement. Since our research was conducted, there have been increased moves to resettle IDPs and close camp-like settings within Nigeria. However, as of July 2022, the IDP population within camps and camp-like settings remained at 988,428, or 40% of the IDP population in north-eastern Nigeria (IOM, 2022). Our research, therefore, provides important insights into the impact of data-driven humanitarianism for IDPs in the region and is also of broader interest across a range of sites of ongoing conflict and displacement.

Key findings from our research with regional practitioners and IDPs are:

- ▶ Various divergences emerge within the collection of data in the camps, including in classifying and identifying IDP vulnerabilities.
- ▶ Limited technological resources and infrastructures, along with limited data literacies on the part of key personnel, generate obstacles to sharing datasets and render data storage and handling processes incoherent.
- ▶ There is a generalised failure to effectively engage affected IDP communities in the design and use of the data provided.
- ▶ Ethical processes require improvement, with full information disclosure and comprehension often appearing to be neglected.

In the detailed analysis which follows we describe, represent, and reflect on the perspectives of the different interviewees. In line with our methodology outlined above we privilege the views of the actors and their own words where possible, and do not claim to present a series of facts or objective statements. We bring together the perspectives of all interviewees with our own analysis to draw out the most salient issues and findings in response to the research questions which the project poses.

Divergences in data collection

Data collection in the camps is a **continuous yet fragmented process**, with many IDPs providing data regularly to a range of different agencies. For example, research participants at our IDP workshop in Abuja provided a long list of organisations that had requested data from them, with one even reporting that he had provided data up to five times in one day. The IDPs we interviewed also refer to their provision of different types of data, including household, biometric, biographic, and needs assessment data related to issues such as health, education, sanitation, and food.

Practitioners similarly highlight a wide range of processes of data collection within the camps:

NGOs like CEDAR and GISCO, SALIENT, IOM are all collecting data inside the camp... In relationship to people, in relation to gender, in relation to health issues, disabilities, in relation to hunger and everything (WP3.SH.02.02).

This statement suggests that different vulnerabilities often drive data collection processes. While the identification of vulnerabilities often requires specialist training, not all actors have access to the same levels of training, or understand the complex processes involved in defining and identifying vulnerabilities. For example, some of our interviewees suggest that vulnerabilities are easily observed without specialised knowledge (WP3.SH.02.06, WP3.SH.02.02), while others suggest community leaders can help identify the most vulnerable:

We used to identify them through their Bulama's (community leaders) inside the camp and their people, after pointing to us that they were among the vulnerable people known to them; this is before we can register, collect data and admit them to the camp (WP3.SH.01.08).

In terms of who is prioritised for support, some refer to "pregnant women, lactating women and people with disabilities" (WP3.SH.02.01), some refer to those who



have suffered sexual violence (WP3.SH.02.02), and some refer to “women with special needs, separated children in need ...widows, aged people that cannot take care of themselves and people with chronic disease” (WP3.SH.02.03). Children under five, lactating and pregnant mothers are described as prioritised around health (WP3.SH.02.07), though some practitioners report difficulties in ascertaining the ages of IDPs (WP3.SH.02.02, WP3.SH.02.04). A few highlight the importance of invisible vulnerabilities that can lead to some people missing vital support, such as the “mentally retarded” [sic] or mentally unwell (WP3.SH.02.05, WP3.SH.02.06, WP3.SH.02.09).

Divergences in the classification and identification of IDP vulnerabilities are significant because they highlight how gaps and frictions can emerge in the collection of data (Section 4). Although IDPs provide data regularly, some groups can be excluded from data collection and from assistance. For example, one stakeholder indicates that young men are less worthy of support and therefore are not targeted for data collection (WP3.SH.02.01), while others suggest that those leaving the camp during the daytime (WP3.SH.02.08) or women who are not permitted by their husbands to undertake interviews (WP3.SH.02.07) are inadvertently missing from processes of data collection. Some IDPs also refer to preferential treatment in the provision of services, such as if assistance is organised through camp leaders who prioritise those with whom they have existing relations (WP3.IDP.02.02). While our data does not verify or quantify the precise differences in service provision, the interviews do point to factors which can lead to inconsistencies and inequalities.

Many practitioners we interviewed highlight the problem of too much data, both in terms of doubling data (WP3.SH.02.07) and of there being too many IDPs or too much movement to and from the camp (WP3.SH.02.04). Rather than generating additional data to fill the ‘gaps’, our findings here are suggestive of the need for data collection to be more effectively designed to account for the dynamism of displacement and for the multiple vulnerabilities in the camps that arise through prolonged experiences of displacement. This highlights the **need for interoperable datasets and improved use of existing data**, rather than the generation of more data (see Section 3).



Data storage and handling

A key factor in the effective design of processes of data collection and use relates to technological resources and infrastructures, along with data literacies on the part of key personnel:

To improve, you must look at the personnel and material sides. The personnel need more training; on the other hand, we need more equipment. We don't have power here, we need generators, computers etc. to be improved in data collection (WP3.SH.01.10).

Funding constraints are clearly an issue in the contexts where we undertook our research, yet our interviews nevertheless indicate that more needs to be done. While most of the practitioners we interviewed had undertaken training in ethics and related areas, **training in data ethics is largely absent**. In addition, many of the stakeholders we spoke to highlight a lack of equipment – computers, tablets, laptops, phones etc., while one refers to network issues as detracting from effective data collection and use (WP3.SH.02.05).

The IDPs we interviewed draw attention to the diversity of data collection methods, with some stakeholders using phones and tablets and others using non-digital formats to record data:

Yes, they only write what we tell them, they don't have recorder like this to record (WP3.IDP.01.11).

They have a record book and big phone [i.e. a tablet]. I saw them with phones, but I saw how they are doing it. Not any book to record (WP3.IDP.01.06).

They use phone to take our pictures, a [digital] recorder like this one, and also paper to write some things (WP3.IDP.02.36).

What these statements suggest is that there are variable practices in the handling and storage of data, as well as in processes of data collection. Such variations detract from the effective sharing of data, as suggested by the stakeholders with whom we spoke:

Uhhh... everyone in the humanitarian services has his way of storing his data. The way I will store my data is not how others can do it, so everyone has a way of storing data (WP3.SH.01.03).

When we collect too much data, storing it is also a problem. We are short of some facilities to keep the data (WP3.SH.01.08).

Data security and **issues of data responsibility** arise here, and are generally described as resulting in limited access to data for both practitioners and affected communities:

We used to record data and store it on our computer or laptop. We kept it on two or three different records so that it would not spoil (WP3.SH.01.04).

There are inconsistencies in data use because of dishonesty and corruption among the people and over the data storage system. No way for now because we don't have access to both storage and dissemination (WP3.SH.01.06).

We store them on our tablet and forward it to our supervisors and they are the ones that have the access (WP3.SH.02.07).

Nobody has access to their data (WP3.SH.02.02).

Our findings here indicate that further investments need to be prioritised to ensure the secure and effective coordination and sharing of data. This is key in guarding against the unnecessary proliferation of data collection in IDP camps, and in empowering affected communities in its collection and use.

IDP engagement and informed consent

While incoherent definitions and processes of data collection and management can detract from the potential for data sharing and coordination, the proliferation of data gathering and changing practices of data acquisition can also lead to significant **research fatigue and frustration** on the part of IDPs:

Many people come here to access data. But, in the end, you are not going to see them again. They will take pictures, carry our data, and leave after all (WP3.IDP.01.03).

No, almost all the information I have given have not been useful to me (WP3.IDP.02.02).



The process of informed consent potentially mitigates against the worst of these frustrations, while also preventing the generation of increasing quantities of upward-flowing data. However, our findings suggest that practices of informed consent do not embed data rights concerns, and generally fail to enhance the data literacy of IDP communities.

Practices of informed consent vary widely across the organisations involved in data collection within camps in north-eastern Nigeria. Some practitioners explain that they simply tell IDPs data collection is to meet their needs, while others – such as agencies providing more specialised psychosocial support – explain how they spend more time discussing with IDPs the importance of sharing data:

You have to tell them the importance of your coming before you can begin to collect their data... We are collecting data in order to assist them (WP3.SH.02.09).

I just talk to them verbally and they will agree. From the beginning, I explain the purpose, procedure and aim of the data collection. I also explain to their understanding the importance of the data, telling them that it will help them later (WP3.SH.02.07).

...the IDPs, they don't open up the moment you go to them. They must take time, you sit with them and counsel them then later they will open up and give you what is happening to them and all the data you requested (WP3.SH.02.01).

The IDPs we spoke with were often unclear about why their data had been collected, for what purposes and by whom it would be used, and what their rights were in relation to the provision of data. Most describe consent as oral or sometimes written, and while many recognise that data collection is not compulsory, they nevertheless often seem to **assume that the receipt of assistance is linked to the provision of data**. Several also report the failure of those collecting data to ask for consent:

They are not giving us any consent form to sign ... they get permission from the state government. They will just start the interview (WP3.IDP.01.03).

While the crisis modalities in humanitarian response of course generate pressures that mitigate against more time-consuming processes of informed consent, our findings indicate that the use of new modes of data acquisition are not coupled with a commitment to ensuring affected communities are meaningfully informed, and thus fully consensual, regarding the collection and use of increased quantities and diverse forms of data. This finding also comes out of our research in South Sudan, as we will explore further in Section 6.

6. CAMP-LIKE SETTINGS IN SOUTH SUDAN

Although South Sudan gained independence on 9 July 2011, conflict broke out in December 2013 leading to high levels of violence and displacement, with **over 2 million internally displaced** within South Sudan (OCHA, 2022b). South Sudan has a long history of armed conflict, having experienced five decades of civil war as part of the previously unified Sudanese state. Since independence, internal civil conflict has become more complex and multi-layered and often, though by no means always, has taken on an ethnic or inter-communal dimension.

From 2021 to 2022, the *Data and Displacement* research team conducted **in-depth qualitative interviews** with 50 IDPs across the two camps in Bentiu and Juba. We also interviewed 20 stakeholders and practitioners working with IDPs in the camps, with the aim of deepening our understanding of data-driven humanitarianism in contexts of internal displacement. There are currently five camps in South Sudan. Since 2020, these have been redesignated as IDP camps and their management has transitioned to the South Sudanese government, where previously they were designated as Protection of Civilian Sites (PoCs) under the management of the United Nations Mission in South Sudan (UNMISS). As of April 2022, over 135,000 IDPs were registered in the Bentiu camp (Reliefweb, 2022a), while in January 2022 approximately 33,000 resided in the Juba camp (Reliefweb, 2022b). There are 12 service clusters in the camps, which comprise a range of international humanitarian organisations and provide services such as camp management, water, sanitation and hygiene, health, psychosocial support, food, shelter, education and protection. Our research therefore provides important insights into the impact of data-driven humanitarianism on IDPs in camp-like settings in situations of ongoing conflict and displacement.



Key findings from our research with regional practitioners and IDPs are:

- ▶ Large-scale humanitarian data collection is evident in both camps, indicative of the growing commitment to data-based assessment of the immediate and long term needs of IDPs.
- ▶ However, there are different understandings and processes of data collection among different agencies, as well as between humanitarian actors and IDPs.
- ▶ Rapid data collection as IDPs flee danger tends to be prioritised, followed by the immediate distribution of lifesaving emergency assistance and admission into a secure camp. Conditions of deprivation are widespread and have worsened over the past few years.
- ▶ The training of practitioners in the areas of data and ethics are limited, and ethical practices such as informed consent are often lacking. Disparities between international and national or regional agencies, largely based on access to funding, generate differences in the ability of organisations to consistently and ethically generate data.

In the detailed analysis which follows we describe, represent, and reflect on the perspectives of the different interviewees. In line with our methodology outlined above we privilege the views of the actors and their own words where possible, and do not claim to present a series of facts or objective statements. We bring together the perspectives of all interviewees with our own analysis to draw out the most salient issues and findings in response to the research questions which the project poses.

Humanitarian data collection

International organisations with the capacity to collect and process large-scale data tend to drive humanitarian data collection in the camps in South Sudan, including through the yearly Humanitarian Response Plan which generates data to mobilise donor funds. Those involved in camp management describe data collection as an opportunity to advocate for assistance and to “attract some other humanitarians to come and then provide the services” (WP4.SH.02.04). As a stakeholder working for an international organisation indicates:

There is no way you can do anything without data being involved. Data is what drives us, and it is what puts a spot where it is dark. It is what informs humanitarians about the service that is not present. So that is why it is very relevant and very important because it is this data that informs us of what is really wrong such that we can take the relevant actions, to safeguard, to protect and respond to the harm that is in place (WP4.SH.01.02).

The **presence of large-scale humanitarian data collection** in each of the locations where we undertook our research is indicative of the growing commitment to data-based assessment of the immediate and long term needs of IDPs in South Sudan, and of the demands by donors for data to evidence use and effectiveness of funds (WP4.SH.02.13).

International organisations and actors involved in camp management increasingly use **digital forms of data** for the provision of services (WP4.SH.02.13). For example, biometric systems include data on the number of people registered, their names, gender, age, place of origin, and year of arrival (WP4.SH.02.04). The move from manual to digital systems is seen by stakeholders as enabling improved management of data, improved data access, and improved mechanisms for the processing of complaints and the deterrence of corruption. By contrast, agencies operating at a regional or national level are more likely to use manual methods of data collection and handling due to a lack of funding:

We just put our data in the office here - you can see the office. We hardly have computers (WP4.SH.01.10).

...local organisations do not have the capacity at all. We do our things here with no such gadgets and no funding (WP4.SH.01.11).

We have very limited funding and our data collection is basic. We do not use any equipment, we take the data manually (WP4.SH.01.14).

Existing national-level data is described by one stakeholder as outdated, and as necessitating the support of zone or block leaders to update information (WP4.SH.01.04).

Differences between international and regional organisational practices are thus particularly stark in the South Sudanese context, both in terms of data collection as well as in terms of data management and usage.

Data sharing and access across clusters and agencies is a relatively well-established practice, particularly in the Bentiu camp which has seen high levels of international humanitarian support over a long duration. Bi-weekly cluster meetings involving key partner organisations serve as spaces for the informal sharing of data and information relating to IDPs (WP4.SH.02.04). In addition, data is shared more formally between key agencies, where required. A stakeholder involved in the camp's management says:

...when we work as, as a team, we work collaboratively. So, whenever there is a need for us to get any information that we don't have in our, in our files, we request [it from] that particular organisation, and they will always provide it to

us. So, we don't have any difficulty of accessing any information we want from other partners (WP4.SH.02.04).

While there appear to be better processes of sharing and accessing data in South Sudan in comparison to north-eastern Nigeria (Section 5), there are nevertheless different understandings and processes of data collection that can create **frictions and incoherence** across the data journey. Concerns about sharing sensitive data in cluster meetings are raised by one stakeholder (WP4.SH.02.10), while another emphasises the need for the approval of data that is extracted from the camp (WP4.SH.02.15). Data is collected by volunteers from field locations in Bentiu using the KoBo Toolbox open-source data collection tool, before being transmitted to Juba for verification. Limited data literacies can cause problems here if data collectors "are not very conversant with using their smartphones" and sometimes "are not giving you the correct information" (WP4.SH.02.04). In such cases, responsibility for rectification or re-collection of data lies with Juba, and data collected via KoBo is not accessible from the field once submitted (WP4.SH.02.03, WP4.SH.02.04). New forms of data acquisition thus generate new challenges.

Need and deprivation

Rapid data collection as IDPs flee danger tends to be prioritised in South Sudan, followed by the immediate distribution of lifesaving emergency assistance and admission into a secure camp. However, it is worth noting that the majority of IDPs with whom we spoke had arrived several years in advance (see Section 2), with recent arrivals resulting from flooding and other exogenous pressures not necessarily subject to the same processes. In addition, stakeholders suggest that issues arise where the most vulnerable "don't speak up, they don't have voice" (WP4.SH.02.09), with many falling through the cracks of protection and assistance due to a failure to register (WP4.SH.02.13).

Many of the IDPs we interviewed refer to the initial process of data collection they were involved in, whereby family information was gathered to enable a decision to be made about which camp they would be taken to (WP4.IDP.01.01). Some indicate that they have participated in ongoing needs assessment interviews (WP4.IDP.01.06), while others say they have not been asked information on their needs (WP4.IDP.01.05) and that their losses have not been recorded (WP4.IDP.01.03). A lack of donor funding during Covid-19 was raised as a factor by a stakeholder involved in water and sanitation, who explains how "even as a stakeholder there is little I can do... We have the information on the number of latrines to be fixed and the garbage to be collected, but we no longer have funding to provide these services. Things got worse during Covid, our funds were slashed... we are helpless" (WP4.SH.01.04).

Areas of focus in ongoing data collection processes tend to be focused on **groups defined as vulnerable**. This includes those identified as elderly, as children, as youth, and as women, as well as those effected by Sexual and Gender Based Violence (SGBV). The identification of vulnerabilities often requires specialist training and not all actors have access to the same levels of training, or understand the complex processes involved in defining and identifying vulnerabilities. Our interviewees described varied practices and some challenges. As in north-eastern Nigeria, stakeholders highlight challenges in identifying which IDPs fit into such categories, such as “difficult[ies] for us to know who [counts as] the youth” (WP4.SH.02.04). However, the focus on vulnerable groups has also led to tensions at times, with IDPs often not understanding that some data collection processes are specifically aimed at ascertaining the need of vulnerable groups. As a stakeholder attending our project event in Juba explains, “...data can be collected from all IDPs, to ascertain the needs of vulnerable groups, but many IDPs do not understand that. So, when assistance is provided to those who are vulnerable, other IDPs claim they are being left out”. The stakeholder notes: “IDPs do not understand the different intentions behind data collection processes in certain situations” (project event, Juba, 24 August 2022).

While some IDPs emphasise equity and fairness in terms of the provision of assistance in the camp, others identify particular sectors (WP4.IDP.01.02) and groups (WP4.IDP.01.03, WP4.IDP.01.07) as prioritised over others:

...the other services are given equally but only some few services are not given to everyone. There are people with specific needs, vulnerable people are given some specific items, which others don't receive (WP4.IDP.02.17).

While our data does not verify or quantify the precise differences in service provision, the interviews point to factors which may lead to inconsistencies and inequalities. One man we interviewed in Juba suggests that data is generally taken from the women who are at home, rather than from men (WP4.IDP.01.09), while a young man from Juba suggests that the youth in a specific zone of the camp are left out of consultation processes and are effectively forced into criminality (WP4.IDP.01.10). There are thus different and contested understandings surrounding processes of data collection and use among IDPs themselves.

Camp conditions in South Sudan are poor, with water, sanitation and hygiene services overstretched, a lack of basic healthcare provision, and drastically reduced food supplies. One IDP expresses frustration over reduced food rations, explaining that “...before Corona, we used to get

food every thirty days and now it is once in three months” (WP4.IDP.01.06). When asked whether stakeholders explain the reasons for the reduction in food rations, she notes that “no explanation has been given for the reduced food rations, but things have changed since the pandemic struck” (WP4.IDP.01.06). These pressures were further exacerbated during the period when we undertook our research due to overcrowding resulting from flooding in Bentiu and due to economic crisis in Juba. For instance, civilians with the means to survive in Bentiu initially resisted moving into the camp, but after losing properties and their sources of livelihoods due to the floods many had no option but to join relatives in the camp. One stakeholder suggests that “...it seems the floods were completing what the war started and instead of recovering from the war, the floods started, making people more vulnerable” (WP4.SH.02.02).



The handover of PoCs to the government generated additional insecurities in the camps and we found there to be limited internet access and limited or no availability of electricity in the camps. The quality of services dwindled after the pandemic struck, yet the conditions in Juba were more dire when we visited in April-May 2022 than they were in Bentiu when we visited in October-November 2022. Concerns on the part of IDPs in this context relate mainly to the generalised lack of basic resources – including food, water, sanitation, and appropriate shelter:

In the past years the water was okay, but from 2021 we have very little water. Especially the water we drink, it is clean, but is not brought on time. Sometimes it is brought to the zone three times in a week and that is not enough for all of us. I don't want to talk about food. In the past it was okay, but in 2018 our rations were reduced (WP4.IDP.01.02).

...many people are dying because of sickness, others because of malnutrition, others because of lack of many things, even water (WP4.IDP.02.03).

A range of exogenous factors have thus exacerbated conditions of deprivation to an extreme level over recent years, generating devastating conditions that raise serious concerns.

Where deprivation is extreme and widespread, some IDPs are more forgiving than others of humanitarian organisations that fail to provide the assistance they require:

Humanitarians are doing nothing, even the food ration which is even reduced up to 50%, is not enough (WP4.IDP.02.19).

...the humanitarian [organisation] which provides food, uh, is doing its best. Is just that, there are so many people who are not registered. And others who came from other places and people are sharing the small that they have. Uh, we have that culture of, you know, of sharing things (WP4.IDP.02.20).

In this context, one IDP highlights a range of community complaints that have been raised against humanitarian organisations, claiming that “nothing has been done about it yet” (WP4.IDP.02.19). Another goes so far as to ask whether the world today is one that is “working for humanity or working for something else” (WP4.IDP.02.28). Yet another appeals: “we want to know what is going on. We need to be involved in some decision making” (WP4.IDP.02.20). Such statements highlight the importance of meaningful informed consent and follow-up information in the collection and use of humanitarian data.

Informed consent, data access, and follow-up information

As in north-eastern Nigeria, our findings from South Sudan indicate that the training of stakeholders in the areas of data and ethics are limited, and that ethical practices such as informed consent are often lacking. Some stakeholders with whom we spoke had had no formal training in data and ethics (WP4.SH.02.11), while others who had undertaken some basic training in data collection had not “received any formal training on data collection and ethical standards” (WP4.SH.02.10). Although international humanitarian organisations often have better resources to provide training for data collectors, data-specific training is not always provided (WP4.SH.02.13). We also found instances of smaller organisations integrating more reflective processes of ethical training as part of their data collection processes with trauma victims (WP4.SH.02.12).

Practices of informed consent are variable, with some organisations recording consent orally (WP4.SH.02.10)



and others recording consent both verbally and in a written format (WP4.SH.02.12). Many IDPs indicate that they were not asked for consent when providing data, with some indicating that they have no idea how their data is used (WP4.IDP.01.06, WP4.IDP.02.09). Feedback is often lacking after data collection has been completed, with the upward flow of data identified as problematic by one IDP in Bentiu:

...the humanitarians take the information to [the] funder but ... they don't give feedback to us and explain to us that this is what happen to us to the data that we have [given] (WP4.IDP.02.28).

Practices vary here, with specialised regional organisations often providing more information to IDPs about why they are collecting data and what happens with this (WP4.SH.02.12). Such practices are generally welcomed by IDPs, even in contexts of stark deprivation when the outcomes of data collection are lacking:

[It] is very good that some people ... come back and give feedback, that is very good even if they don't give you anything (WP4.IDP.02.21).

The **importance of feedback** is evident not only in facilitating trust and an ongoing commitment to participate in processes of data collection on the part of IDPs, but also in addressing some of the frustrations outlined previously. In a context where need outstrips assistance capacities and where new forms of data acquisition generate increasing pressures on affected communities, a review of ethical processes in the collection and use of humanitarian data are increasingly necessary.

The significance of providing feedback to IDPs on processes of data collection and use became particularly evident in our project events in Bentiu and Juba, where informed consent emerged as an object of debate. On the one hand, we found that stakeholders view informed consent, whether verbal or written, as a precondition to data collection, although the type of consent taken depends on the literacy levels of the IDPs. On the other, we found that many IDPs believe stakeholders do not adhere to standard processes. Several IDPs suggest that they are aware that informed consent is not taken properly before data collection, and explain there is nothing they can do about it because complaining about it may affect the assistance they receive. Stakeholders express frustrations with the process of informed consent, with one in Bentiu explaining that "... taking informed consent is not necessarily the problem, but rather the formalities of informed consent scare off IDPs and sometimes affects the methods of data collection" (Project event, Bentiu, 24 August 2022). Our research is instructive here, since it points to importance of empowering IDP communities in the collection and use of data. As an IDP who we interviewed in Juba and who attended our project event explains: "I was worried that the information I shared with the Data and Displacement project would be handed over to government, but now that the researcher returned to share the findings, I am relieved and would not hesitate to allow the researcher access again" (Project event, Juba, 17 August 2022).

Summary of findings

Findings from the *Data and Displacement* project indicate that **a range of operational and ethical challenges** have been generated by the introduction of new data forms and modalities to the humanitarian sector over recent years. While our analysis demonstrates that the international humanitarian community is critically attuned to many of these challenges, it also documents the frustrations of IDPs and regional organisations who are burdened by the demands of the so-called “data revolution”.

Based on our in-depth analysis of data-driven humanitarianism in IDP camp-like settings across north-eastern Nigeria and South Sudan, our research shows:

- ▶ International humanitarian standards, principles, and guidelines have been developed over recent years in relation to operational issues, such as the coordination of data, and in relation to ethical issues, such as informed consent and data responsibility. However, these **do not translate effectively into humanitarian operations and data practices on the ground**. Processes of data collection and management are often fragmented and incoherent, while differing perceptions regarding the meaning of humanitarian data and the scope of humanitarian protection and assistance work against ethical practices of data collection and use. Which actors are collecting data and how, if at all, these are linked up to wider datasets and systems of coordination is not always clear.
- ▶ These limitations relate in part to issues of capacity and resourcing. International organisations are often better funded and can have more established training programmes than regional or national organisations. That said, there are also considerable difficulties in collecting data in situations of conflict and displacement, which national or regional organisations are sometimes better placed to navigate. For example, we found examples of more ethically attuned data collection practices in smaller and more specialised national or regional agencies, even where these are under-resourced. That said, we also found practices of data storage and handling to be more haphazard in agencies without adequate funding. **Infrastructural and technological resources are often insufficient** in the context of new forms and modes of humanitarian data.
- ▶ The logics and the ethics of humanitarianism can also work against ethical practices. Given the orientation of the sector toward crisis situations and conditions of sudden and extreme need, data collection tends to be focused on new arrivals and specific crises or concerns. Periodic needs assessments are carried out regardless of whether assistance has been provided, with the failure to consistently follow-up on findings tending to hinder the effective targeting of protection and services. In situations of conflict and displacement where deprivation levels are high, **‘quick and dirty’ forms of data collection and humanitarian intervention** often predominate.
- ▶ Low levels of data literacy in both IDP and localised stakeholder communities is a significant concern, with our research finding evidence of **systematic under-investment in the training, education, and meaningful engagement** of affected communities. For stakeholder communities, this can result in a lack of knowledge or understanding of different forms of humanitarian data and of how these can inform humanitarian decision-making. For IDP communities, this can lead to misunderstandings about why data is collected and how it is used, while also mitigating against an understanding of data rights. It can also perpetuate complex relationships of authority, fear, and need between IDPs and stakeholders involved in processes of humanitarian data collection.
- ▶ **Repeated practices of data collection are problematic**, particularly in contexts characterised by a generalised lack of resources and assistance capacities and where levels of basic need are high. Cluster and agency-based data collection processes, propelled by competition and the need to report to donors, generates assessment fatigue for IDPs who repeatedly share their data without seeing any tangible results in so doing. Donor demands in this sense generate additional burdens for IDP communities as well as for data collectors on the ground, which are not matched by additional benefits for affected communities.

Detailed recommendations

The recommendations we advance based on findings from the *Data and Displacement* project are organised in relation to three key areas:

1. Data minimisation and data sharing
2. Meaningful informed consent
3. Capacity building and data literacy

As well as providing insights for other researchers working on these themes, our findings will be of interest to donor and policy communities; to governmental and intergovernmental agencies, NGOs, and INGOs; as well as to IDPs themselves. Reflecting our Theory of Change (Section 2), recommendations are oriented toward the greater inclusivity of data-driven humanitarianism, IDP empowerment in practices of data collection and use, and improved outcomes for IDPs.

Data minimisation and data sharing

- ▶ **Donors and policy communities:** Targeting support is problematic if it means that data is repeatedly collected from communities that will ultimately not be provided with any assistance. Incentives should be provided to ensure data collection is undertaken only where necessary, based on clear information for IDPs about the scope and limitations of participation and about opt-out options. Any new initiatives need to be considered within the context of the wider humanitarian data ecosystem, and monitoring and evaluation processes should be designed with data responsibility in mind. Accountability to affected communities should also be incentivised, with funder auditing requirements reduced as far as possible. Existing guidelines need to clarify what accountability means in contexts of conflict and displacement, while emphasising that data collection is only appropriate when required for actions that will benefit members of the affected community.
- ▶ **Governmental, intergovernmental agencies, NGOs and INGOs:** A mapping of the humanitarian data ecosystem should be undertaken prior to embarking on any new data collection and analysis projects. Data collection should only be pursued if interoperable datasets do not already exist, and should be designed to facilitate interoperability (e.g. through common data structuring and commonly agreed indicators). Data collection must provide tangible benefits to the communities involved. While this does not mean that all IDPs providing data will necessarily receive assistance, it does require that the scope and limits of likely benefits are clearly communicated to IDPs in advance and a clear rationale for data collection – as well as opt-out – is provided. Data impact assessments should be undertaken to facilitate feedback from IDPs,

and data responsibility and data accountability diagnostic tools implemented. Mechanisms to share data with, and gain feedback from, IDPs should be prioritised and included in programme design and funding structures.

- ▶ **IDPs:** While providing data does not always bring with it any direct benefit, it is important that the potential benefits for IDPs and IDP communities are explained and that there is a clear rationale for the provision of data. IDPs have the right to be informed of who is taking their data and for what purposes. IDPs should not be obliged to provide data when asked. Sometimes participation in data collection may be necessary to access services. However, this should never be assumed, and it is the right of IDPs to be fully informed about the reasons for data collection and the uses of their data.

Meaningful informed consent

- ▶ **Donors and policy communities:** Ethical commitments should be put at the centre of data-driven humanitarianism, with developments around data acquisition and analysis subject to appropriate ethical review. Given the changing nature of humanitarian data and new modalities of data acquisition, existing ethical guidelines should be revisited and enhanced based on key principles in data ethics. These include issues related to fairness, transparency, anonymity, ownership, and legibility of data. Incentives should be provided to ensure that meaningful practices of informed consent are prioritised in the design and execution of funded programmes, and ethics should be central to any auditing requirements.
- ▶ **Governmental, intergovernmental agencies, NGOs and INGOs:** The purposes of data collection and use need to be fully understood by IDPs, based on meaningful practices of informed consent that are sensitive to contextual and cultural specificities. IDPs must be informed of their data rights, and mechanisms put in place to facilitate the empowerment of affected communities in the collection, management, and use of data. Such mechanisms include data sensitisation meetings carried out in camps prior to data collection, to provide opportunities for questions and to inform community members of the research aims, the interventions under evaluation, and the evaluation methods. Ethics guidelines and training should be enhanced to ensure reflection on key principles in data ethics, such as fairness, transparency, anonymity, ownership, and legibility.
- ▶ **IDPs:** It is the right of IDPs to be informed of the reasons why they are being asked to share data. It is also their right to be provided with the option

of non-participation, with information about how to withdraw participation, and with information about the implications of not participating. It is common practice for consent to be taken orally or in writing; either way it is important that a clear explanation is provided about what consent refers to. It is the responsibility of data collectors and those handling IDP data to protect the data and identity of participants. It is best practice for sensitisation meetings to be organised to support IDPs and IDP communities to have a better understanding of why their data is collected and how it will be analysed and used.

or logical. However, it is the responsibility of those collecting and handling data to discuss with IDPs how the information they provide is turned into data and what happens with the data, and to answer any questions IDPs have, listening and responding to concerns or ideas raised about the use of IDP data. Information should be provided in a way that IDPs can understand and through a means that IDPs can access. The *Data and Displacement* 'data journey' was created to help both IDPs and practitioners better understand these processes.

Capacity building and data literacy

- ▶ **Donors and policy communities:** Investment in infrastructural and technological facilities is required to build capacities within and outside the camps, so that changing forms and modalities of data can be appropriately collected, stored, shared, and utilised. In addition, investment in the training, education, and engagement of both IDP and stakeholder communities should be prioritised. Enhanced training in data ethics and literacies will reinforce and enhance key values and definitions in the humanitarian sector, while also supporting stakeholders to understand existing data better and coordinate their data collection and analysis activities. In addition, enhanced training will ensure that IDPs better understand how their data is managed and used. Incentives should be provided to generate visualisations that are accessible to affected communities, such as the *Data and Displacement* 'data journey' (Section 4).
- ▶ **Governmental, intergovernmental agencies, NGOs and INGOs:** Data ethics and data rights should be central to processes of data collection, management, and use. Enhanced training of regional practitioners is required to ensure the ethicality of data collection and use, the accuracy of data, and the effective sharing of data between agencies. IDPs must be informed of their data rights, and mechanisms put in place to enhance the understanding of affected communities surrounding the collection, management, and use of data. In addition to sensitisation meetings prior to data collection, IDPs should be provided with regular feedback after each data cycle to enhance issues of transparency, ownership, and legibility in data-based decision-making. Information should be disseminated in easy to access formats, such as via the radio or via visualisations such as the *Data and Displacement* 'data journey'.
- ▶ **IDPs:** IDPs should be informed about how their data is handled and stored, as well as for what it will be used. Processes of data collection, management, and use are complex and are not always smooth

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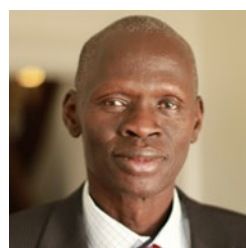
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